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ABSTRACT

This document contains a final report, evaluation report, and materials from the Better Educational Skills Training (BEST) workplace literacy program in Vermont. The seven-page final report describes program components: (1) expanding and institutionalizing the workplace literacy program developed through two previous national workplace literacy demonstration grants; (2) documenting and disseminating its promising practices; and (3) delivering workplace education in three Vermont counties to employees of firms in manufacturing, construction, health care, and small business sectors. A total of 1,081 employees of 12 employers were served during the project. Attached to the final report are a review and articles about project publications. The external evaluation by Donald J. Leu concludes that the project met its major goals for improving workers' literacy levels and contributing to positive changes in the organizations. The evaluation's appendix describes the evaluation plan, provides forms used to collect formative and summative data, and addresses the process decisions involved in the use of the evaluation instruments. The last section of the document presents results of program evaluation interviews conducted with employees at participating companies by Robert T. McLaughlin. The following conclusions are offered: respondents agree that the quality of instruction was high; students and instructors appeared willing to adapt to each workplace's logistical constraints; and respondents wanted more employees to benefit from the program, but felt that some stigma was associated with participation. (KC)

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ED 426 202

# BEST Final Report

## Better Educational Skills Training

**V198A40261-96**

**September 15, 1998**

## Vermont Adult Learning

CE077656

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## Program Description

The Vermont Institute for Self-Reliance, d/b/a Vermont Adult Learning received this three-year Workplace Literacy Demonstration Program grant to 1) expand and institutionalize the Better Educational Skills Training (BEST) workplace literacy program developed through its two previous national workplace literacy demonstration grants; 2) document and disseminate its promising practices; and 3) deliver workplace education in three Vermont counties to employees of firms in manufacturing, construction, health care, and small business sectors.

This program is unique in its development of comprehensive strategies for responding to the context and culture of each workplace in its mode of service delivery and the content of its courses and workshops. This responsiveness stems from our commitment to an employee-led process of identifying workforce educational needs and interests and developing a long term plan for addressing them. The BEST program was able to custom-design curricula to meet employees' needs and demands while consistently achieving quality, because the foundation for all instruction is a problem solving and "learning to learn" philosophy linked to the SCANS skills. Thereby, BEST builds employee self-confidence, flexibility, and promotability, while strengthening attitudes and skills necessary for lifelong learning.

The educational service delivery strategy includes individual learning plans, individualized instruction, small instructor-led classes, topical workshops, cooperative learning, alternative assessments, and a unique interactive instructional software tool called "Responsive Text." A total of 1,081 individuals working for 12 different employers were served, as the table below shows.

| Employer | # served | Sector |
|---|---|---|
| Rutland Regional Medical Center | 339 | health care |
| General Electric Aircraft Engines | 170 | manufacturing |
| Northeast Cooperatives | 65 | wholesale |
| Vermont Store Fixture | 7 | small business |
| Fleming Oil | 83 | small business |
| Southern Vermont Home Health | 76 | health care |
| Ideal Horizons | 49 | small business |
| Geka Brush | 35 | manufacturing |
| Middlebury College | 123 | custodial |
| Carris Reels | 127 | manufacturing |
| Bread Loaf Construction | 6 | construction |
| Russell Corporation | 1 | constuction |
| **Total employees serve** | **1,081** | **unduplicated count** |

## Fiscal Data

The project period initially was October 1, 1994 to September 30, 1997. The project period was formally extended to February 2, 1998 in order to complete the dissemination of project products and allow the project director to be a presenter at the 1998 Winter Institute on Adult Basic Education in the Workplace jointly sponsored by Georgia's Life Long Learning Network and The Centre for Literacy in Montreal. The grant award for the three year (plus four month) project totalled $776,854. A recipient cost share (match) of $343,042 was required. The total match (in kind and cash) exceeded $420,988. Of this amount, $133,265 took the form of cash contributions from the business partners towards the cost of classes for their employees.

| Budget Period | Fed $$ awarded | MATCH OBLIGATED | | |
|---|---|---|---|---|
| | | In-Kind | Cash | Total Match |
| 10/1/94-9/30/95 | $276,236 | $59,964 | $0.00 | $59,964 |
| 10/1/95-9/30/96 | $293,549 | $152,929 | $20,822 | $173,751 |
| 10/1/96-2/2/98 | $207,069 | $74,830 | $112,443 | $187,273 |
| Total | $776,854 | $287,723 | $133,265 | $420,988 |

## Some Successes & Challenges

### Products

One lasting success is our dissemination products. The strategy of full-time adult educators writing for their peers set our products apart from others. Our products are proving valuable to adult educators in this country and abroad as well as being useful in Vermont Adult Learning's welfare to work programs.

### Evaluation Design

Our triangulated evaluation design was quite successful at capturing impact at multiple levels: customer satisfaction, learning gains, and job performance. Our external evaluator worked closely with the teaching staff to design the evaluation procedures. Our instrument for assessing strategic knowledge was tested and revised repeatedly to create an open-ended yet scorable format that allows learners to freely express their experiences and documents the effects of our teacher's emphasis on metacognition. We also collected success stories to provide qualitative examples of the gains measured. A selection of these are included in the appendix.

### Learner's Lives

The impact of the program on individual learners lives is most certainly of lasting value beyond the end of the project. Skill gains were accompanied by increased confidence, self-esteem, and belief in oneself as a learner. In a number of cases this resulted in dramatic attitude and job performance changes. Teacher

Trisha Handly describes one such case in this account of a long-term reading student of hers at a manufacturing plant.

"Imagine sitting in a business meeting and being unable to comprehend much of what the guest speaker is saying. One of my students, John, experienced almost continual rage at situations like this. He was a very hostile young man, with not just a chip but an *anvil* on his shoulder. In other areas of his life, he had successfully isolated himself from situations where his inadequacy could potentially prove embarrassing. The work place was different, however. There he was stuck. He had to participate in team meetings. When John asked me why the speaker couldn't have found simpler ways of expressing himself, rather than using so many "big" words, I had to explain why people used comprehensive terms, rather than a entire sentence, to define a concept. When we considered how large an instruction manual would have to be if single words were eliminated and replaced with 10-15 word sentences, he got the picture. But he was still ticked off. Anxious to help him with his difficulties, and realizing that despite his progress whith his reading, it would be years before he would be able to enjoy adult-level printed materials, I suggested he get a library card--that was a first!--and check out some audio books.

Still hostile, John trotted off to the library. He listened to books in his truck going to and from work. He listened at his workbench. He listened doing chores. At first he kept phonetic lists of words he didn't understand so we could discuss them in class. As his comprehension skills using context clues increased, so did his confidence. He read more. And more. The man who <u>never</u> had a library card in his life <u>now reads</u> 5-7 AUDIO BOOKS A WEEK.

Slowly John came out of his isolation. His intellectural curiosity grew. He got braver. He began attending movies made from books he'd read. He even attended a play with a supportive neighbor, whom he could occasionally poke to ask a question. John's hostility began to evaporate as his understanding of his world grew.

His manager wrote me a wonderful note on the annual survey we take of employees' on-the-job changes since participating in our program. He said John was a "changed human." Instead of being continually angry, he had become cheerful and helpful on the job, speaking up in team meetings and even volunteering for new assignments rather than complaining about what he was given to do. We both noticed a new spring in John's step.

And the anvil was gone."

### Reaching Non-Readers

In Vermont isolation, embarrassment, and fear are major barriers to program involvement for individuals who see themselves as non-readers. To overcome this difficulty we attempted to briefly and informally interview every employee in each of the workplaces. We offered individual tutoring to those who weren't ready to take a class. We also presented the B.E.S.T. program as a brush-up program for everyone. Still we know from supervisors and co-workers that there were individuals with substantial reading difficulties who never volunteered for the program.

### Sustained Business Involvement

Aligning the B.E.S.T. program with the firms' business goals was elusive. We pursued a number of avenues toward this end. We established planning and evaluation teams at each business with employees, supervisors and management represented. We brought the business partners together with our external evaluator and our teachers to explore criteria for success and how the program could contribute to the bottom line. We made presentations to management committees. We sought a strong investment in the program from all stakeholders in each business; however, support was uneven. Most of our partners did continue the program--and pay for it--for most of the year following the end of the grant. However, as of January 1999 we will be teaching only a few classes at a few businesses. Several employers ended the program because of budget cuts or business down turns. Others felt the program had run its course and was no longer enjoying strong enthusiasm from employees.

### Marketing

Our plan to use this, our third workplace literacy demonstration grant, to institutionalize workplace education was on target. The strategy of asking business partners to contribute toward the costs of classes in years 1 and 2, and to make a cash contribution to cover the cost of the teacher in year 3 was effective. It forced us, as a nonprofit accustomed to providing "free" services to think in business terms. The employers shifted their thinking and expectations too, as they paid more for services. Thus we had a year of grant funding to adjust. Unfortunately, we had not anticipated the cost or the time involved in developing a business and marketing plan, producing marketing materials, and marketing the program. Had we been able to complete all curricula products in year 2, we might have been reasonably successful in institutionalizing and marketing the program in year three. All the same, Vermont Adult Learning did commit organizational resources beyond the grant to marketing the program and has embraced workplace education as one of its services. We did attempt to aggressively market workplace education beyond the end of the grant, but budget constraints have forced us to abandon that position. Still we do publicize the availability of workplace education and respond enthusiasticly to business

inquirees. Although small, workplace education is continuing as a service of Vermont Adult Learning.

## Outcome Goals Acheived

Outcome goals 1, 2, and 5 were addressed by the external evaluation conducted by Dr. Don Leu. These goals--all of which were acheived--are reproduced below, and the Executive Summary of Dr. Leu's evaluation is reproduced on page 7. A detailed discussion can be found in Dr. Leu's complete Final Report (dated Feb. 8, 1998) in the appendix. Please note that permission was granted on 9/20/95 to modify outcome #5 and its objectives to the statements printed below.

**1. Increase the literacy levels of targeted individuals especially in regards to reading, writing, math, communication and problem solving tasks in the workplace.**

**2. Demonstrate that completion of the BEST program results in positive organizational outcomes such as improved employee performance, especially increased involvement in activiites designed for continuous quality improvement.**

**5. Dr. Leu will conduct a systematic independent formative and summative evaluation of the project.**

**5.1 Dr. Leu will design an evaluation that is grounded in the instructional goals of the project and the concerns of the business partners.**

**5.2 Dr. Leu will conduct an evaluation of student learning gains and the effects on job advancement and job performance. He will also evaluate project impact on the businesses.**

**5.3 (deleted).**

Outcome goal #3 was revised during grant award negotiations as follows.

**3. Assess the impact of BEST on the social dynamics and culture of the workplaces and on productivity, job retention and career advancement.**

Dr. McLaughlin interviewed a range of stakeholders focusing on their operational definitions of effectiveness. The interviews with education department and human resource leaders in particular revealed impact on social dynamics and culture. Dr. McLaughlin's report (May 1995) is in the appendix.

**4. Create curriculum and staff development products and disseminate project results widely.**

We proceeded according to our federally approved dissemination plan and approved revisions to it. We mailed copies of all products to each State's Literacy

Resource Center and each NWLP project director as well as national clearinghouses and ERIC. We also posted information to the NIFL--Workplace Literacy listserv and mailed information to State Directors of Adult Basic Education. We have presented workshops and displayed products at major national conferences including AAACE, COABE, Workplace Learning (Milwaukee), and the Winter Institute (Atlanta). The paper presented in Atlanta by Judith Lashof and Mike Hillinger is in the appendix. Selections from our book Reflections on Workplace Education are on-line with the Hub 1 web site (formerly, Eastern LINCS) and Mike Hillinger of LexIcon Systems has established a web site (www.lexiconsys.com) where visitors can actually use Responsive Text Software.

We've just sold three hundred copies of our Communication for Workers curriculum to The Center for Literacy Studies at the University of Tennessee for distribution to Adult Basic Education teachers in that state's welfare to work programs. We are in dialog with New Reader's Press about distributing Workshops for Workers and Communication for Workers. Presently, copies of all of our dissemination products can be purchased directly from Vermont Adult Learning.

All of our print products were created by teachers for teachers. Teachers played a major role in the development of the video and the software. Our product list is in the box below; an order form is in the appendix.

**Curriculum and Staff Development Products**

**Applied Learning on the Oregon Trail**
**Communication for Workers**
**Confidence in the Workplace (14 minute video)**
**Reflections on Workplace Education: Teachers Talking to Teachers**
**Responsive Text Software Macintosh Demo Disk and Manual**
**Communications Skills**
**Hazardous Communication & Tools for Quality**
**Workshops for Workers**

# Executive Summary

This evaluation presents the final report for the BEST project and evaluates the extent to which the BEST Program met its initial objectives. In general, we have followed the evaluation plan developed in the first year of this project. Instruments and procedures are included in the Appendix. Summative data are reported here; formative data have been reported on an on-going basis.

The major findings from the evaluation include:

- Statistically significant gains appeared on the strategy inventories for participants who worked on reading strategies, communication/problem solving strategies, and writing strategies but not for participants who participated on math strategies. Both teachers and participants reported seeing gains in reading, writing, math, communication and problem solving strategies for participants who worked in these areas. Supervisors/co-workers saw gains in each area with the exception of math strategies.
- Statistically significant gains appeared among participants working at the two highest levels of reading comprehension but not for those working on level one. Among those working at level one, statistically significant gains appeared in decoding scores. Gains in reading ability were perceived by participants, teachers, and supervisors/co-workers.
- Statistically significant gains appeared among participants working on improving their writing. Gains in writing ability were also perceived by participants, teachers, and supervisors/co-workers.
- Statistically significant gains appeared among participants working on improving their math. Gains in math ability were also perceived by participants and teachers, but not by supervisors/co-workers.
- Statistically significant gains appeared among participants working on improving their work-related communication skills and problem solving. Gains in work-related communication skills and problem solving were perceived by participants and teachers, but not by supervisors/co-workers.
- Participants perceived they had made "good" progress on their top three learning goals during both the first six-month and the second six-month period.
- Participants and supervisors perceived increases in a wide range of areas associated with positive organizational outcomes. The greatest increase appears to have occurred in participants' interest in continuing their education.

In summary, the BEST project has met the major goals established at the beginning for improving literacy levels (reading, writing, math, communication and problem solving) and demonstrating that participation in the BEST program results in positive organizational outcomes. Many lives have been fundamentally improved by the results of this program; many positive changes have taken place within the organizations in which participants work.

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Rutland, Vermont
February 8, 1998

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Review of "Reflections on Workplace Education: Teachers Talking to Teachers" by Andy Nash
Word's Worth Article
Success Stories in Literacy, Learning, and Workplace Performance

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B.E.S.T. Program Evaluation Final Report by Donald J. Leu, PhD
Evaluation Interviews by Robert T. McLaughlin, PhD

Applied Learning on the Oregon Trail
Communication for Workers
Confidence in the Workplace (14 minute video)
Reflections on Workplace Education: Teachers Talking to Teachers
Responsive Text Software Macintosh Demo Disk and Manual
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Hazardous Communication & Tools for Quality
Workshops for Workers

# VERMONT ADULT LEARNING

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# Workforce Education Curricula Order Form

If you're searching for teacher-friendly curricula specially designed for workforce education in an easy-to-use, professional, attractive format--look no further!

These workshops were created ***by*** teachers ***for*** teachers. They're learner-centered, highly interactive, and truly teacher-friendly. Activity-based, the teaching guides are simple for both teachers new to workplace education and experienced teachers to use and adapt to their specific circumstances.

**Workshops for Workers** -- 3-hole punched, shrink-wrapped and ready for insertion into your own binder:

Business Writing: Simple and Strong (6 hrs)•Better Writing on the Word Processor (6 hrs.)•The Challenge of Change (10 hrs.)•Communication on the Telephone (2-3 hrs.)•Growing in Self-Confidence (10 hrs.)•Introduction to Medical Terminology (6 hrs.)•Taking Charge of Stress (10 hrs.)•Do You Forget? (7.5 hrs.)•Funny, I Don't Remember Reading That! (6 hrs.)•Speaking Up in a Group (5 hrs.) $ 89.00 Qty_____ Total_____

**Applied Learning on the Oregon Trail** -- stapled -- how to use MECC's *Oregon Trail II* simulation to develop essential workplace skills: collecting and analyzing information, communicating ideas, planning and organizing resources, working in teams, using mathematical ideas and technology, solving problems, understanding and designing systems, as well as learning and teaching on demand.
$ 5.00 Qty _____Total_____

**Communication for Workers** -- activity-based teaching guide, spiral bound:
The Communications Process (2-3 hrs.)•The Listening Process (2 hrs.)•Barriers to Communication (2hrs.)•Assertiveness (4-6 hrs.)•Communicating with Difficult People (2 hrs.)•Communicating in Groups (2-3 hrs.)•Working in Teams(2-4 hrs.) •Problem Solving and Decision Making (4 hrs.)•Handling Conflict (4 hrs.)
$ 20.00 Qty_____Total_____

**Responsive Text (Mac Disk)** -- "Communication Skills 1" demo & manual -- provides a powerful way to develop complex reading skills with students in control of the process. $ 25.00 Qty_____Total_____

**Video: Confidence in the Workplace** -- 14 mins. -- students, teachers, and employers explore impact of education program on the workplace.
$ 35.00 Qty _____Total_____

***Complete Set*** **(SAVE $24!!)** $150.00 Qty _____Total_____

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# Review of "Reflections on Workplace Education: Teachers Talking to Teachers"

*by Andy Nash*

Every educator I know has come to appreciate and even rely on the growing number of homegrown publications that teachers are writing for teachers. The teachers in Vermont's BEST program have recently added a new contribution to this collection, a description of their workplace education program called Reflection on Workplace Education: Teachers Talking to Teachers. This text is accessibly structured around the "essential questions" the staff had to answer for themselves as they implemented workplace programs in a variety of businesses. Their questions lead us through the areas of program design, teaching philosophy, curriculum development, and workplace education issues.

As a workplace educator, I came to the text wondering if it would address the problematic issues that I face time and time again (that seems to be a major role for peer publications - we turn to them for assurance that we are not uniquely "challenged".) And it does, with recognizable anecdotes about running programs in settings where you have many players to satisfy but limited control.

Having found my connection, I went on to read about the key elements of BEST's approach. The program is committed to student-centered learning, involving workers from the beginning in employee education committees that survey workers about their educational needs and interests. Classes emphasize metacognition, teaching people to notice how they think and learn, and evaluation is done collaboratively rather than through standardized tests.

One missing piece that would have been helpful is more background on who the students are and what these particular workplaces are like. These students seem more educationally advanced than most of the students we work with in the Massachusetts Workplace Literacy Consortium. Still, we share many of the same dilemmas - worker/students who fear that participating (or not participating) in classes will target them for lay-off, supervisors who are reluctant to release workers for class, etc. - as well as similar rewards - students who take this sometimes difficult step for themselves, workers who gain confidence and become more active in and out of work, and employers who begin to recognize the strengths of certain employees.

"Reflections" offers us a glimpse into an area of adult education that many teachers don't have access to, as these programs are delivered at worksites and away from learning centers where teachers' paths cross. If you've been wondering what happens in such programs, the BEST teachers offer one place to begin.

*Reflections on Workplace Education: Teachers Talking to Teachers was written by Pamela Letourneau-Fallon, Kate Taylor, Laura Chase, Candice Kramer, Judith Lashof, Judy Palmer, Dorothy Ziegler, and students, from the Better Education Skills Training Program (B.E.S.T.) of Vermont Adult Learning. For more information contact the B.E.S.T. program at (802) 775-0617.*

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## About NELRC . . .

**The mission of the New England Literacy Resource Center is to foster collaboration and sharing among the six New England states in literacy-related professional development, program innovation, information resources and technologies in order to enhance the delivery of basic educational services to adults. The NELRC News is a supplement to each New England State's ABE Newsletter, and is edited by Silja Kallenbach, Coordinator of the NELRC.**



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# WORD'S WORTH

A Quarterly Newsletter of the Lifelong Learning Network

Spring 1998

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*by Michael Hillinger and Judith Lashof*

*(Dr. Michael Hillinger is President of LexIcon Systems in Sharon, Vermont. He can be reached via e-mail at mlh@lexiconsys.com. Judith Lashof is Director of Grants at Vermont Adult Learning in Rutland. She can be reached via e-mail at JudyLashof@aol.com.)*

In 1990 LexIcon Systems began working with Vermont Adult Learning on a federally-funded workplace literacy project. LexIcon explored how the emerging multimedia capabilities of computers could be used to assist workers in reading training manuals, learning safety procedures, and other job-relevant tasks. The result is an approach called Responsive Text™.

**Responsive Text and Reading Theory**

Responsive Text is based on what we know about fluent readers. Before describing how the program works it is useful to review what research has found about the reading process and how these findings are reflected in Responsive Text.

*Reading as a multi-level process*

Most theories of reading describe comprehension as a multi-level process and proficient readers bring many skills to the reading task. These include:

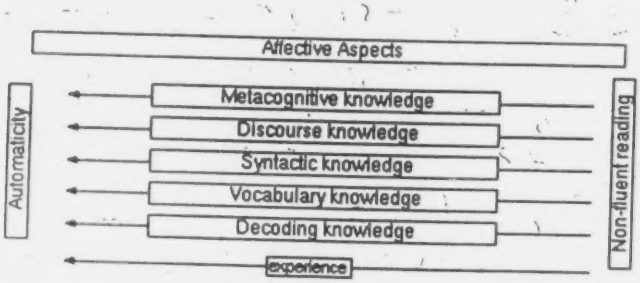



Figure 1. A multilevel model of reading

Decoding Knowledge. At the most basic level, reading proficiency requires decoding visual representations of words into a phonological representation (Gough & Hillinger, 1980). While poor readers may be able to decode words, the process is often difficult and diverts attention from higher-level comprehension.

Vocabulary knowledge. As Chall (1983) notes, reading beyond the earliest stages requires a store of background knowledge. Knowledge of vocabulary, phrases, and idioms, all gained through reading, is necessary for later reading stages. Poor readers are often deficient in the necessary background knowledge to understand a passage.

Syntactic knowledge. All languages follow predictable rules of grammar. While most of us cannot state these rules, we implicitly use them to form grammatical spoken sentences. This knowledge of syntax provides clues that a good reader will use in comprehending written language.

Discourse knowledge. Written language has its own structure that a good reader can utilize. Narratives generally follow a common form of introducing characters, plot, and resolution. As readers gain experience they can use this "story grammar" to guide their reading. Expository text also has many structural cues, such as text headings and subheadings, that provide valuable information.

Metacognitive knowledge. Good readers monitor their comprehension, continuously asking "Does this make sense? What am I doing? Does it work?" This monitoring allows the readers to adjust their reading to meet different task demands. Baker & Brown (1984) have noted that poor readers often have difficulty monitoring their comprehension of a passage.

*Non-fluent reading to automaticity*

How and when these processes are used depends on the fluency of the reader and the difficulty of the reading material. At the earliest stages of reading development the reader's attention is focused on decoding and understanding simple sentences. With practice these lower-level processes become more automatic, allowing the reader to shift more attention to higher-level processes.

Mature readers can shift the relative importance of these processes with the difficulty of the text. With familiar material, fluent readers focus their attention on higher-level comprehension, but when confronted with unfamiliar and/or more complex material, they may shift their focus to lower levels.

*Responsive Text design*

This theoretical framework leads to these design principals:

Use multimedia to support reading comprehension. Poor readers may need help at one or more levels of reading, and Responsive Text uses the computer to provide this assistance (Figure 2). A reader who has difficulty decoding can have the computer provide a spoken version. When vocabulary is weak, the system can provide background of varying complexity.

Encourage reading as an active process. Higher-level comprehension requires that readers ask questions, make predictions, and find information. To encourage this, Responsive Text poses questions, provides writing

(continued on page 19)

*continued from page 7*

opportunities, and allows the reader to explore more detailed information.

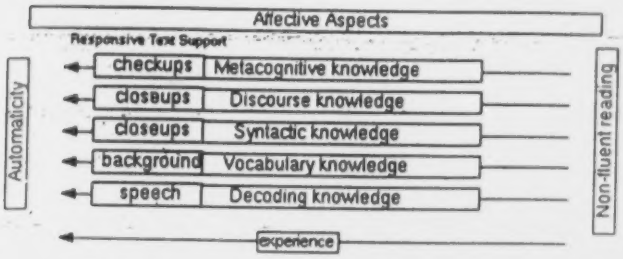



Figure 2. Responsive Text Support Structure

Integrate multiple forms of literacy. As Kirsch & Jungeblut (1986) have demonstrated, literacy requires more than knowing how to read; what they refer to as Prose Literacy. In real life we have to read and interpret charts, tables, and graphs, which they call Document Literacy. We also must frequently draw upon math skills, which they refer to as Quantitative Literacy, to comprehend numerical relationships and evaluate simple data. Responsive text supports skills in prose, document, and quantitative literacy.

View literacy contextually. Literacy should be viewed within the context of the reading task. While basic skills instruction is often considered as a prerequisite to training job-relevant skills, the distinction between a basic skill and job skill is not always clear. Responsive Text embeds basic-skill support and instruction within job-relevant content. If a reader needs help on a graph in the Basic Statistics component of Tools for Quality or a new medical term in Bloodborne Pathogens, Responsive Text can provide the basic skill instruction within a relevant context.

By making basic skill support an integral part of the lesson, Responsive Text removes the distinction between training basic skills and job skills. It provides a bridge between programs that provide extensive but generic basic skill instruction and commercial job training programs (See also Hillinger, 1992).

**Responsive Text Overview**
Moving through Responsive Text is similar to turning pages in a book. To move to the next "page," click on the arrow in the upper right. To move to the previous page, use the arrow in the upper left. While you could go through all of the lesson using only these forward and back arrows, it is more likely you will use some of the supports accessed through the other screen buttons. These supports include:

**Speech**
Decoding words—the action of transforming written symbols into sound using rules of pronunciation—is frequently the first stumbling block encountered by poor readers. Responsive Text provides digitally encoded

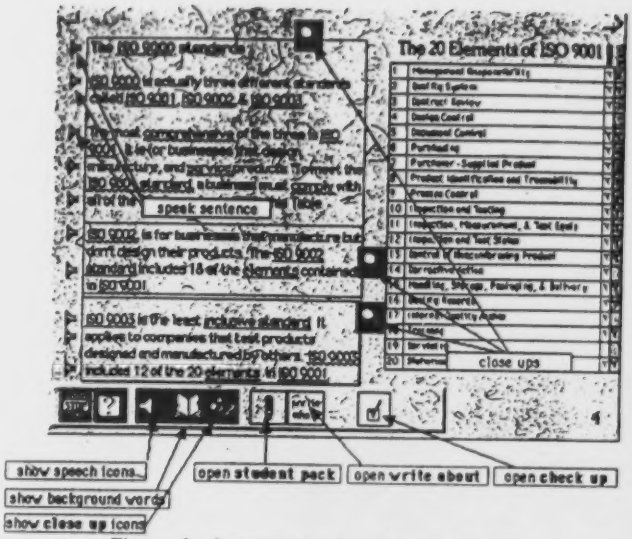
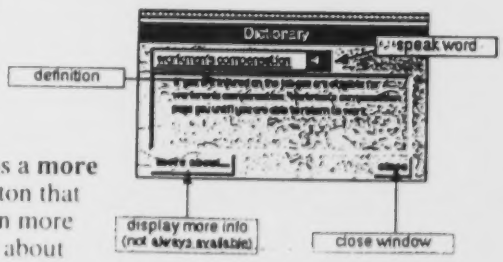



Figure 3. Responsive Text Screen Layout

speech to assist decoding. When the speech function is ON, speaker buttons are shown to the left of each sentence in the text. Click the speaker to hear each sentence read. While the sentence is being read it is highlighted in blue.

**Background**
Even with adequate decoding skill, comprehension of more complex material is difficult without sufficient background knowledge. When background is ON some of the words in the text are underlined to indicate that more information is available. Click on these underlined words and its definition is displayed in a small window. For some words, the dictionary also contains a **more about...** button that leads to even more information about the topic.




**Closeups**
Even with decoding and background support, understanding text, diagrams, graphs, and other information can be difficult. Closeups provide general purpose support for anything on the screen that may need more explanation. The explanation could include a page summary, a pictorial representation, or even an animation. When you turn on Closeups, the areas of the screen

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that have closeups are designated with a small magnifying glass icon. Clicking each icon reveals the additional information.

**Check up Question**
Reading is an active process, and Responsive Text uses Check up questions to insure you understand what you've read thus far. Check up questions also encourage comprehension monitoring—the active checking of understanding while reading. Check ups range from simple true-and-false questions to engaging simulations. To encourage you to try the checkups, no performance record is kept. Figure 4 shows an example of a check up question on inferences from a text on ISO 9000.

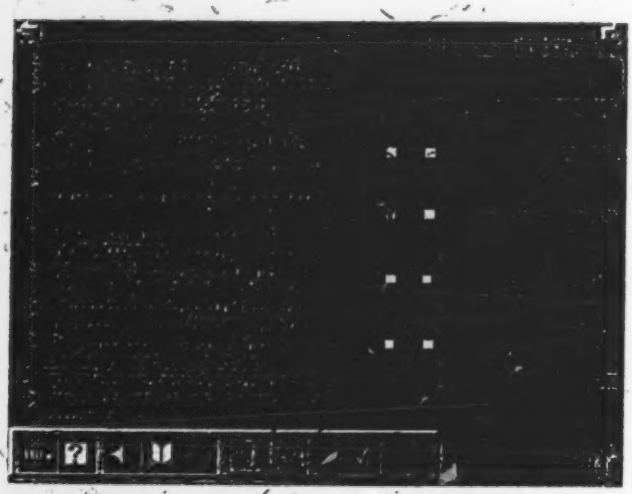

Figure 4. Check up question on inferences

**Student Pack—Writing and annotating**
Writing can be a useful way to further explore what you are reading. A key component of the most recent version of Responsive Text is the capability to write, communicate, and annotate. These features are built into a suite of tools called the Student Pack.

The Student Pack is a 10-page notepad that can be opened at any time. In addition to keeping notes you may also send these notes as e-mail to others registered on the computer.

You can also place text as a "sticky note" on any Responsive Text page. Sticky notes can be comments, suggestions, or anything that you want to say. They offer the chance to "talk back."

To encourage writing, some pages have an open-ended writing suggestion available from the Write About button.

**Implementing Responsive Text, the Practical Side**
Selecting Content
Responsive Text was developed as a component of each of Vermont Adult Learning's three Workplace Literacy Program Federal Demonstration grants. In the first grant, the employer's training manuals were converted to Responsive Text. In theory, this was a wonderful design for teaching the comprehension strategies, vocabulary, and knowledge needed for literacy in the workplace. However, reality did not comply. Shortly after starting to use Responsive Text in our literacy classrooms, the company suspended its training classes for all workers in favor of a more hands-on certification process. In addition, a number of workers in our classes reported that they wanted to read something more interesting than company training manuals.

In the second grant we emphasized more generic training topics including OSHA required training. This content did not change rapidly and the topics were relevant to many companies. Blood Borne Pathogens and Hazcom were particularly well received. We developed Blood Borne Pathogens with the training department of the Rutland Regional Medical Center and provided it to new housekeepers, guest services, and nursing assistants. Several small companies without in-house training departments contracted with us to provide the required Hazcom training for all their employees. Nearly all employees reported that they learned the information fully and enjoyed the features of Responsive Text. Those who had experienced lecture or video tape Hazcom "training," reported that they learned far more from Responsive Text. In addition, delivering this training allowed us to informally observe worker's literacy skills and refer those workers who needed all of the Responsive Text supports to Brush-Up classes.

We expanded our range of topics with our third grant to include Assertiveness, Sexual Harassment, and a GED oriented unit in the form of a newspaper. Our intention was to generate greater learner and teacher interest in the subject matter. However, these topics were delivered on a CD-ROM and we were able to purchase only one CD ROM computer for each of our work site classrooms. Although the "Bulletin Board" and "Sticky Notes" features of this enhanced version of Responsive Text support creative use of the software in our computer classrooms, our teachers rarely organized their classes to take advantage of this.

Teachers, Technology, and Reading
Responsive Text is a rich and sophisticated learning tool. For teachers to embrace it and use it to its fullest extent the following conditions should be present:

1. Easy access to Responsive Text
2. Responsive Text valued as a powerful learning tool
3. Teaching methodologies that encompass computer-based learning as integral to instruction.

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*Easy Access.* Vermont Adult Learning's use of Responsive Text was hampered by limited technology resources. This grant provided our first opportunity to use computers in the classroom. Our teachers were faced with installing Responsive Text on several different computer configurations and only one or two computers per classroom were capable of running the newest version of Responsive Text. Ideally, teachers new to technology would have classrooms equipped with the same model computer for every one or two students and someone to call on to manage the computer system and install Responsive Text for easy access by students and teachers. Alternatively, it could be used in a computer lab by teachers experienced in managing computer-based learning centers.

*Valuing Responsive Text.* Responsive Text is a powerful way to develop complex reading skills and strategies with the student in control of the process. Teachers who view reading as a simple linear process of decoding followed by identifying main ideas and details are likely to view Responsive Text as too complicated for their students. Teachers who have internalized a multi-dimensional model of the reading process will understand that Responsive Text mirrors the complex nature of reading itself. They will appreciate the control that it gives each learner to select and use multiple reading strategies and the instructional power of making these strategies and their selection visible and conscious.

*Teaching Methodologies.* Teachers who rely primarily on lecture and group discussion or on drill and practice will find little place for Responsive Text in their classrooms. However, Responsive Text can be effectively integrated into a wide variety of learning environments.

For example, in an individualized learning lab environment, Responsive Text can be used for self-paced instruction. In this environment the teacher will need to take care to introduce each feature of Responsive Text to learners and follow-up over several sessions to insure that learners are familiar with WHAT each feature can offer, HOW to access each feature, and WHEN in their individual reading process to do that. A periodic discussion with a small group of learners reflecting on the Responsive Text features and reading strategies helpful to each learner will enhance metacognitive awareness.

In a reading and writing brush-up class, Responsive Text can be used in a wide variety of ways. The writing and message tools can be used to facilitate written dialog and an "informed conversation" that develops naturally. Alternatively, after reading a selection through once, learners can be directed to reread it to complete an assignment focusing on a feature such as vocabulary that is the topic of the class. The Responsive Text lesson can be selected for the informational content and can be integrated into a thematic unit such as Sexual Harassment. Alternatively, the lesson can be selected to focus on a type of text, such as documents and the variety of tables and charts that are embedded in them.

A variety of classroom management strategies are possible. The teacher can work with half the class, or a small group of students while the others use the computers. If there are sufficient computers all students can use them at the same time. Once students are able to use Responsive Text independently, the teacher can hold short individual conferences while the others are working.

**In Summary**

Responsive Text can be used flexibly in a wide variety of learning environments and for a range of purposes. The power of Responsive Text can be unleashed by a capable teacher who appreciates the complex nature of reading, creatively structures learning experiences, and has adequate access to technology resources.

**References**

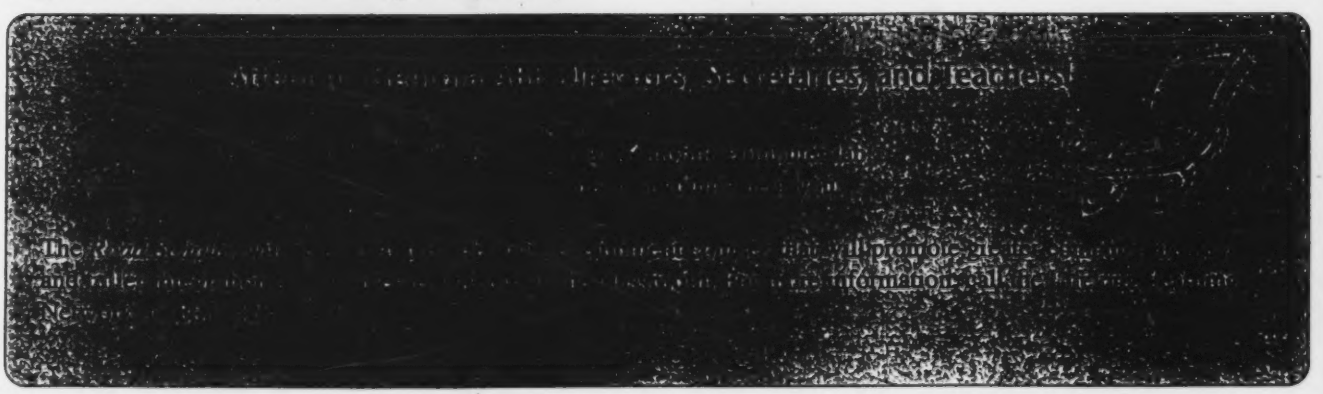
Baker, L. & Brown, A.L. (1984) Metacognitive skills and reading in P.D. Pearson, M. Kamil, R. Barr, & P. Mosenthal (eds.) *Handbook of Reading Research.* New York: Longman pp 353-394.

Chall, J.S. (1983) *Stages of Reading Development.* New York: McGraw-Hill.

Gough, P.B. & Hillinger, M.L. (1980) Learning to read: An unnatural act? *Bulletin of the Orton Society* 30 179-196.

Hillinger, M.L. (1992) Computer speech and responsive text: Hypermedia support for reading instruction. *Reading and Writing: An Interdisciplinary Journal* 4: 219-229

Kirsch, I.S. & Jungeblut, A. (1986) *Literacy: Profiles of America's young adults.* (NAEP Report No. 16-PL-01) Princeton, NJ. ETS



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# Success Stories in Literacy, Learning, and Workplace Performance
# B.E.S.T.

**Purpose:** The purpose of this form is to capture a brief description of a successful episode about how this project has increased literacy, learning, and workplace performance. Teachers, employee participants, supervisors, or employer liaisons are all encouraged to complete this form in order to help us document these success stories.

**Directions:** Please fill in the date, location, author, and topic information. Then describe the success story as clearly as you can. Tell us what happened and why you think this is a success story. Use quotes where possible so we can hear the voices of participants. Use only first names. You should also use pseudonyms for individual and company names if you believe that the information you provide might offend anyone if they were to read it.

**Date:** 3-20-96 **Location:** Carrig

**Author:** Tom Posch **Topic:** Brush up lab
(literacy, learning, workplace performance, or other)

When I started to take the Brush up lab I had the feeling that I had forgotten most of the things from high school. It turned out that I remembered more than I thought. I soon found myself looking for math problems and solving them just about everywhere I went. I was encouraged to take an AutoCAD class at Stafford Tech. Center. I really enjoy the the AutoCAD class and plan to further my learning in Computers. I hope to get a job in the Computer Department. I don't plan to stop there. I would ultimately become an Architect. I'm not going to be able to go to college right away but plan to in the near future.

Tom will be included in an intensive company-sponsored C.A.D class with 3 other employees.

**May we share this story with others?** Yes \ No _____

**Feel free to continue on the back of this page, if necessary.**

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**Date:** 11/16/95 **Location:** Brattleboro

**Author:** J. Nolan **Topic:** communications
(literacy, learning, workplace performance, or other)

Using what she had learned + practiced in the communications workshop, Ann has been able to repair serious friction between heiself and her 24 yr old son. She used her problem-solving strategies to determine that constructive communication could only happen in a one-to-one situation. They are now talking about + opening up about their relationship from as far back as early childhood.

Ann came across as both relieved and energized with this positive change in her personal life.

She also related that her boss noted her improved communications skills at work, has shown much interest in her class handouts and is thinking about the workshop both for herself as well as another worker. He is putting Ann in charge of another employee who has been deemed "difficult" and Ann says she has already made positive headway with her + has gotten past this person's defensiveness.

**May we share this story with others?** Yes _____ No _____

**Feel free to continue on the back of this page, if necessary.**

"I would have lost my son if it hadn't been for you and this course."

"This course was better than a shrink."



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# Success Stories in Literacy, Learning, and Workplace Performance
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**Date:** 3-4-96 **Location:** Carries

**Author:** _____ **Topic:** Self Confidence + Stress
(literacy, learning, workplace performance, or other)

After taking the Stress management Course, an Incident occured at work, where I was yelled at by the Supervisor. This Situation has happened before and I would get really distressed, and upset over. Also I would get very angry. After taking the stress class I learned some very effective ways to reduce stress. this time when my Supervisor yelled at me I went to the restroom and practiced the deep breathing excercises. It did help reduce my stress, and I felt Calm and a lot better after.

May we share this story with others? Yes ✓ No _____

Feel free to continue on the back of this page, if necessary.

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# B.E.S.T. Program Evaluation
# Final Report

Rutland, Vermont
February 8, 1998

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# Executive Summary

This evaluation presents the final report for the BEST project and evaluates the extent to which the BEST Program met its initial objectives. In general, we have followed the evaluation plan developed in the first year of this project. Instruments and procedures are included in the Appendix. Summative data are reported here; formative data have been reported on an on-going basis.

The major findings from the evaluation include:

- Statistically significant gains appeared on the strategy inventories for participants who worked on reading strategies, communication/problem solving strategies, and writing strategies but not for participants who participated on math strategies. Both teachers and participants reported seeing gains in reading, writing, math, communication and problem solving strategies for participants who worked in these areas. Supervisors/co-workers saw gains in each area with the exception of math strategies.
- Statistically significant gains appeared among participants working at the two highest levels of reading comprehension but not for those working on level one. Among those working at level one, statistically significant gains appeared in decoding scores. Gains in reading ability were perceived by participants, teachers, and supervisors/co-workers.
- Statistically significant gains appeared among participants working on improving their writing. Gains in writing ability were also perceived by participants, teachers, and supervisors/co-workers.
- Statistically significant gains appeared among participants working on improving their math. Gains in math ability were also perceived by participants and teachers, but not by supervisors/co-workers.
- Statistically significant gains appeared among participants working on improving their work-related communication skills and problem solving. Gains in work-related communication skills and problem solving were perceived by participants and teachers, but not by supervisors/co-workers.
- Participants perceived they had made "good" progress on their top three learning goals during both the first six-month and the second six-month period.
- Participants and supervisors perceived increases in a wide range of areas associated with positive organizational outcomes. The greatest increase appears to have occurred in participants' interest in continuing their education.

In summary, the BEST project has met the major goals established at the beginning for improving literacy levels (reading, writing, math, communication and problem solving) and demonstrating that participation in the BEST program results in positive organizational outcomes. Many lives have been fundamentally improved by the results of this program; many positive changes have taken place within the organizations in which participants work.

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## Major Assumptions Used to Guide the Evaluation Plan:

1. We have grounded teaching/learning/evaluation in the unique context of each workplace and the unique needs of participants.
2. We have aggregated data across workplaces.
3. Key participants were involved in the development of the evaluation.
4. Objective data on learning outcomes are triangulated with phenomenological data from both teachers and participants.
5. Objective data on workplace outcomes are triangulated with phenomenological data from both participants and supervisors/co-workers.
6. The Year 3 evaluation includes summative data to determine the extent to which the project met its stated outcome goals and objectives.

# Summative Data: Evaluating Objectives For The BEST Project

**Objective 1. Demonstrate statistically significant gains in participants' awareness and application of effective reading, writing, math, communication and problem solving strategies for the workplace.**

## Summary

Statistically significant gains appeared on the strategy inventories for participants who worked on reading strategies, communication/problem solving strategies, and writing strategies, but not for participants who participated on math strategies. Both teachers and participants reported seeing gains in reading, writing, math, communication and problem solving strategies for participants who worked in these areas. Supervisors/co-workers perceived gains in participants' ability to use reading, writing, and in their ability to communicate effectively. They did not report gains in participants' ability to use math to solve job-related problems.

## Method

We evaluated the statistical significance of pre-post gains on each of the four strategy inventories: reading, writing, math, communication/problem solving. We then triangulated these data with phenomenological data from the Participant Self-evaluation Form, the Teacher's Perception of Improvement Form, and the Changes in Job Performance: Supervisor's/Co-worker's Response Form.

## Results

Reading Strategies

Of the 31 participants who worked on reading strategies and completed both pre and post reading strategy inventories, mean reading strategy scores improved from 6.95 to 11.85. This is a statistically significant gain ($p < .05$).

On average, participants perceived their ability to use reading strategies to have increased as well as their ability to figure out new reading strategies that work for them. Mean scores on these two items of the Participant Self-evaluation Form were 2.93 and 2.95, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers perceived these participants' ability to use reading strategies to have increased and their ability to figure out new reading strategies that work for them to have also increased. Mean scores on these two items of the Teacher's Perception of Improvement Form were 3.21 and 2.85, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers perceived these participants' ability to read job-related material to have increased. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.71 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest score among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 5, "This person's self-confidence" where the mean score was 2.93 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

Writing Strategies

Of the 25 participants who worked on writing strategies and completed both pre and post writing strategy inventories, mean writing strategy scores improved from 7.77 to 10.45. This is a statistically significant gain ($p > .05$).

On average, participants perceived their ability to use writing strategies to have increased and their ability to figure out new writing strategies that work for them to have also increased. Mean scores on these two items of the Participant Self-evaluation Form were 3.11 and 3.12, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers perceived these participants' ability to use writing strategies to have increased and their ability to figure out new writing strategies that work for them to have also increased. Mean scores on these two items of the Teacher's Perception of Improvement Form

were 3.12 and 3.09, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers perceived these participants' ability to write job-related material to have increased. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.67 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest scores among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 14, "This person's interest in continuing their education" where the mean score was 3.31 and on item 5 "This persons self-confidence" where the mean score was 3.22 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

Math Strategies

Of the 8 participants who worked on math strategies and completed both pre and post math strategy inventories, mean math strategy scores improved from 5.63 to 8.55. This is not a statistically significant gain ($p > .05$).

On average, participants perceived their ability to use math strategies to have increased and their ability to figure out new math strategies that work for them to have also increased. Mean scores on these two items of the Participant Self-evaluation Form were 3.53 and 3.73, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers perceived these participants' ability to use math strategies to have increased and their ability to figure out new math strategies that work for them to have also increased. Mean scores on these two items of the Teacher's Perception of Improvement Form were 3.63 and 3.18, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers perceived these participants' ability to use math to solve job-related problems not to have changed. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.10 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest score among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 5, "This persons self-confidence" where the mean score was 3.11 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

Communication and Problem Solving Strategies

Of the 6 participants who worked on communication and problem solving strategies and completed both pre and post communication and problem solving strategy inventories, mean communication and problem solving strategy scores improved from 16.12 to 23.22. This is a statistically significant gain ($p < .05$).

On average, participants perceived their ability to use communication and problem solving strategies to have increased and their ability to figure out new communication and problem solving strategies that work for them to have also increased. Mean scores on these two items of the Participant Self-evaluation Form were 3.11 and 3.05, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers perceived these participants' ability to use communication and problem solving strategies to have increased and their ability to figure out new communication and problem solving strategies that work for them to have also increased. Mean scores on these two items of the Teacher's Perception of Improvement Form were 3.63 and 3.31, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers perceived these participants' ability to communicate effectively at work to have slightly increased. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.42 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest score among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 14, "This persons interest in continuing their education" where the mean score was 3.11 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

## Objective 2. Demonstrate statistically significant gains in participants' reading comprehension of workplace materials.

### Summary

Statistically significant gains appeared among participants working at the two highest levels of reading comprehension but not for those working on levels one. Among those working at level one, statistically significant gains did appear in decoding scores.

On average, participants and teachers perceived participants' ability in three reading areas to have increased: their ability to understand what they read, the extent to which they take control of their own learning and reading, and their ability to use reading strategies. Supervisors/co-workers perceived gains in participants' ability to read job related material.

### Method

We evaluated the statistical significance of pre-post gains on both the decoding and comprehension portions of the reading inventory. We then triangulated these data with phenomenological data from the Participant Self-evaluation Form, the Teacher's Perception of Improvement Form, and the Changes in Job Performance: Supervisor's/Co-worker's Response Form.

### Results

Of the 14 participants who worked on decoding and completed both pre and post reading inventories, mean scores on the decoding portion improved from 29.50 to 37.5. This is a statistically significant gain ($p < .05$).

Of the 5 participants who worked on reading and completed Level 1 Comprehension pre and post reading inventories, mean scores on Level 1 Comprehension improved from 6.48 to 7.47. This is not a statistically significant gain ($p < .05$).

Of the 10 participants who worked on reading and completed Level 2 Comprehension pre and post reading inventories, mean scores on Level 2 Comprehension improved from 5.02 to 7.00. This is a statistically significant gain ($p < .05$).

Of the 16 participants who worked on reading and completed Level 3 Comprehension pre and post reading inventories, mean scores on Level 3 Comprehension improved from 3.21 to 4.64. This is a statistically significant gain ($p < .05$).

On average, participants perceived their ability in three reading areas to have increased: their ability to understand what they read, the extent to which they take control of their own learning and reading, and their ability to use reading strategies. Mean scores on these three items of the Participant Self-evaluation Form were 3.30, 3.14, and 3.25, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers also perceived these participants' ability in three reading areas to have increased: their ability to understand what they read, the extent to which they take control of their own learning and reading, and their ability to use reading strategies. Mean scores on these three items of the Teacher's Perception of Improvement Form were 3.22, 3.05, and 3.06, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers also perceived these participants' ability to read job-related material to have increased. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.78 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest scores among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 14, "This persons interest in continuing their education" where the mean score was 3.44 and on Item 5, "This person's self confidence" where the mean score was 3.25 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

**Objective 3. Demonstrate statistically significant gains in participants' writing for the workplace.**

## Summary

Statistically significant gains appeared among participants working on improving their writing. On average, participants and teachers also perceived participants' ability to have increased in three areas related to writing: their ability to communicate in writing, the extent to which they take control of their own learning about writing, and their confidence in their ability to become a better writer. Supervisors/co-workers also perceived gains in participants' ability to write job related material. In addition, supervisors/co-workers also perceived gains in participants' interest in continuing their education and in self-confidence.

## Method

We evaluated the statistical significance of pre-post gains on the writing sample. We then triangulated these data with phenomenological data from the Participant Self-evaluation Form, the Teacher's Perception of Improvement Form, and the Changes in Job Performance: Supervisor's/Co-worker's Response Form.

## Results

Of the 33 participants who worked on writing and completed both pre and post writing inventories, mean scores on writing sample improved from 6.84 to 8.49. This is a statistically significant gain ($p < .05$).

On average, participants perceived their ability in three writing areas to have increased: their ability to communicate in writing, the extent to which they take control of their own learning about writing, and their confidence in their ability to become a better writer. Mean scores on these three items of the Participant Self-evaluation Form were 2.98, 3.21, and 3.22, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers also perceived these participants' ability in three writing areas to have increased: their ability to communicate in writing, the extent to which they take control of their own learning about writing, and their confidence in their ability to become a better writer. Mean scores on these three items of the Teacher's Perception of Improvement Form were 2.88, 3.11, and 3.15, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers also perceived these participants' ability to write job-related material to have increased. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.77 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest scores among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 14, "This person's interest in continuing their education" where the mean score was 3.23 and on Item 5, "This person's self confidence" where the mean score was 3.17." (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

## Objective 4. Demonstrate statistically significant gains in participants' work-related computational skills and mathematical problem solving.

### Summary

Statistically significant gains appeared among participants working on improving their math. On average, participants and teachers also perceived participants' ability to have increased in three math areas to have increased: their ability to use math to solve problems, the extent to which they take control of their own learning about math, and their confidence in their ability to become better at math. On average, supervisors/co-workers did not perceive these participants' ability to use math to solve job-related problems to have increased substantially. However, supervisors/co-workers perceived gains in participants' self-confidence and their ability to be responsible for their own learning at work.

### Method

We evaluated the statistical significance of pre-post gains on the Math Inventory. We then triangulated these data with phenomenological data from the Participant Self-evaluation Form, the Teacher's Perception of Improvement Form, and the Changes in Job Performance: Supervisor's/Co-worker's Response Form.

### Results

Of the 15 participants who worked on math and completed both pre and post math inventories, mean scores on math improved from 5.39 to 8.91. This is a statistically significant gain ($p < .05$).

On average, participants perceived their ability in three math areas to have increased: their ability to use math to solve problems, the extent to which they take control of their own learning about math, and their confidence in their ability to become better at math. Mean scores on these three items of the Participant Self-evaluation Form were 3.05, 2.83, and 3.13, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers also perceived these participants' ability in three math areas to have increased: their ability to communicate in writing, the extent to which they take control of their own learning about writing, and their confidence in their ability to become a better writer. Mean scores on these three items of the Teacher's Perception of Improvement Form were 3.15, 2.89, 2.84, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers did not perceive these participants' ability to use math to solve job-related problems to have increased substantially. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.22 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest scores among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 5, "This person's self confidence" where the mean score was 3.04 and on Item 6 "This person's ability to be responsible for their own learning at work." where the mean score was also 3.11 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

## Objective 5. Demonstrate statistically significant gains in participants' work-related communication skills and problem solving.

### Summary

Statistically significant gains appeared among participants working on improving their work-related communication skills and problem solving. On average, participants and teachers perceived participants' ability to have increased in three areas related to communication and problem solving skills: their ability to communicate and solve problems effectively, the extent to which they take control of their own learning about communication and problem solving, and their ability to figure out new communication and problem solving strategies that work for them. Supervisors/co-workers did not perceive these participants' ability to communicate effectively at work to have increased substantially. However, supervisors/co-workers perceived gains in participants' interest in continuing their own education.

### Method

We evaluated the statistical significance of pre-post gains on the Interpersonal Communication and Problem Solving Inventory. We then triangulated these data with phenomenological data from the Participant Self-evaluation Form, the Teacher's Perception of Improvement Form, and the Changes in Job Performance: Supervisor's/Co-worker's Response Form.

### Results

Of the 14 participants who worked on communications and problem solving and completed both pre and post communications and problem solving inventories, mean scores improved from 77.59 to 90.23. This is a statistically significant gain ($p < .05$).

On average, participants perceived their ability in three communication and problem solving areas to have increased: their ability to communicate and solve problems effectively, the extent to which they take control of their own learning about communication and problem solving, and their ability to figure out new communication and problem solving strategies that work for them. Mean scores on these three items of the Participant Self-evaluation Form were 3.05, 3.15, and 3.21, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, teachers also perceived these participants' ability in three communication and problem solving areas to have increased: their ability to communicate and solve problems effectively, the extent to which they take control of their own learning about communication and problem solving, and their ability to figure out new communication and problem solving strategies that work for them. Mean scores on these three items of the Teacher's Self-evaluation Form were 3.39, 3.45, and 3.65, respectively (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

On average, supervisors/co-workers did not perceive these participants' ability to communicate effectively at work to have increased substantially. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.40 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). On average, supervisors/co-workers also did not perceive these participants' ability to solve problems at work to have increased substantially. The mean score on this item of the Changes in Job Performance: Supervisor's/Co-worker's Response Form was 2.20 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased). The highest score among these participants on the Changes in Job Performance: Supervisor's/Co-worker's Response Form was on Item 14, "This person's interest in continuing their education" where the mean score was 3.00 (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

## Objective 6. Document achievement of individual learning goals.

### Summary

Participants perceived they had made "good" progress on their top three learning goals throughout the program.

### Method

We evaluated the achievement of individual learning goals with the Learning Goals Inventory. This allowed participants to define their individual learning goals each six months and then evaluate the extent to which they made progress on each goal.

### Results

On average, participants perceived they had made "good" progress on their top three learning goalsthroughout the program. Mean scores on these three items were 2.99, 2.78, and 2.76 (0=none, 1=a little, 2=some, 3=good, 4=great).

On average, participants perceived they had made "good" progress on their top three learning goals throughout the program. Mean scores on these three items were 2.91, 2.88, and 2.77 (0=none, 1=a little, 2=some, 3=good, 4=great).

**Objective 7. Demonstrate that completion of the BEST program results in positive organizational outcomes such as improved employee performance, especially increased involvement in activities designed for continuous quality improvement.**

## Summary

Participants and supervisors perceived increases in a wide range of areas associated with positive organizational outcomes. The greatest increase appears to have occurred in participants interest in continuing their education

## Method

We evaluated attaining positive organizational outcomes by looking at the perceptions of both participants and their supervisors/co-workers in several areas:

- their ability to work effectively with a team;
- their initiative at work;
- their knowledge about the job they do;
- the quality of their work;
- the quantity of their work;
- the responsibility they assume in their work;
- their interest in continuing their education;
- their willingness to accept changes at work;
- their being respectful of diversity and other points of view at work; and
- their involvement in activities designed for continuous quality improvement.

Each item was rated on a 0-4 scale (0=greatly decreased, 1=decreased, 2=no change, 3=increased, 4=greatly increased).

## Results

The average value for each item by participants and supervisors/co-workers is reported below. Participants and supervisors perceived increases in a wide range of areas associated with positive organizational outcomes. The greatest increase appears to have occurred in participants' interest in continuing their education. This item was rated highest by both groups.

| Item | Participants | Supervisors |
|---|---|---|
| Ability to work effectively with a team. | 2.90 | 2.68 |
| Initiative at work | 2.94 | 2.55 |
| Knowledge about the job they do | 3.08 | 2.45 |
| Quality of their work | 2.91 | 2.44 |
| Quantity of their work | 2.86 | 2.47 |
| Responsibility they assume in their work | 2.95 | 2.67 |
| Interest in continuing their education | 3.45 | 2.99 |
| Willingness to accept changes at work | 2.98 | 2.78 |
| Being respectful of diversity and other points of view at work | 2.92 | 2.47 |
| Involvement in activities designed for continuous quality improvement | 2.77 | 2.85 |

# APPENDIX
# B.E.S.T. Program Evaluation Plan

BEST
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# Major Assumptions Used to Guide the Development of the Evaluation Plan:

1. We want to ground teaching/learning/evaluation in the unique context of each workplace and the unique needs of participants.
2. We want to be able to aggregate data across workplaces.
3. Key participants should be involved in the development of the evaluation.
4. Objective data on learning outcomes should be triangulated with phenomenological data from both teachers and participants.
5. Objective data on workplace outcomes should be triangulated with phenomenological data from both participants and supervisors/co-workers.
6. The evaluation should include:

    - formative data to inform teachers, participants, and business partners about the quality of each learning experience provided to participants;
    - summative data to determine the extent to which the project met its stated outcome goals and objectives; and

# Formative Data: Evaluating the Quality of Each Learning Experience

1. Course Evaluation Form (See page 8)
   This will be used to provide instructors, participants, and business partners with information about the quality of each learning experience provided to participants.

# Summative Data: Evaluating Outcome Goals and Objectives

These goals and objectives come from the original grant proposal. The objectives are stated as questions:

Goal 1. Increase the literacy levels of targeted individuals especially in regards to reading, writing, math, communication and problem solving tasks in the workplace.

1.1 How will we demonstrate statistically significant gains in participant's awareness and application of effective reading, writing, math, communication and problem solving strategies for the workplace?

Triangulated data points:

- Pre-post comparisons of mean scores on strategy inventories using ANOVA procedures to determine statistical significance. (See pages 9-12)
- Participant Self-evaluation Form (Items A 4-5, B 4-5, C 4-5, D 4-5 on pages 13-15)
- Teacher's Perception of Improvement Form (Items A 4-5, B 4-5, C 4-5, D 4-5 on pages 16-17)

1.2 How will we demonstrate statistically significant gains in participant's reading comprehension of workplace materials?

Triangulated data points:

- Pre-post comparisons of mean scores on reading comprehension measures using ANOVA procedures to determine statistical significance. (See pages 18-25)
- Participant Self-evaluation Form (Items A 1-3 on pages 13-15)
- Teacher's Perception of Improvement Form (Items A 1-3 on pages 16-17)
- Changes in Job Performance: Supervisor's/Co-worker's Response Form (Items 1, 5, 6 on pages 26-27)

1.3 How will we demonstrate statistically significant gains in participant's composition (writing) for the workplace?

Triangulated data points:

- Pre-post comparisons of mean scores on writing sample using ANOVA procedures to determine statistical significance (See page 29)
- Participant Self-evaluation Form (Items B 1-3 on pages 13-15)
- Teacher's Perception of Improvement Form (Items B 1-3 on pages 16-17)
- Changes in Job Performance: Supervisor's/Co-worker's Response Form (Items 2, 5, 6 on pages 26-27)

1.4 How will we demonstrate statistically significant gains in participant's work-related computational skills and mathematical problem solving?

Triangulated data points:

- Pre-post comparisons of mean scores on Math Inventory using ANOVA procedures to determine statistical significance (See pages 29-31)
- Participant Self-evaluation Form (Items C 1-3 on pages 13-15)
- Teacher's Perception of Improvement Form (Items C 1-3 on pages 16-17)
- Changes in Job Performance: Supervisor's/Co-worker's Response Form (Items 3, 5, 6 on pages 26-27)

1.5 How will we demonstrate statistically significant gains in participant's work-related communication skills and problem solving?

Triangulated data points:

- Pre-post comparisons of mean scores on Interpersonal Communications and Problem Solving Inventory using ANOVA procedures (See pages 34-38)
- Participant Self-evaluation Form (Items D 1-3 on pages 13-15)
- Teacher's Perception of Improvement Form (Items D 1-3 on pages 16-17)
- Changes in Job Performance: Supervisor's/Co-worker's Response Form (Items 4, 13, 5, 6 on pages 26-27)

1.6 How will we document participant achievement of individual learning goals?

- Learning Goals Inventory (See page 39)

Goal 2. Demonstrate that completion of the BEST program results in positive organizational outcomes such as improved employee performance, especially increased involvement in activities designed for continuous quality improvement.

2.1 How will we demonstrate that supervisors report gains in the job performance of employees who complete the BEST program, that employee self-reports will demonstrate gains in job performance, and that positive changes take place with other measures regarded by firm leaders as salient criteria?

Triangulated data points:

- Changes in Job Performance: Supervisor's/Co-worker's Response Form (Items 7-12, 14-17 on pages 26-27)
- Participant Self-evaluation Form (Items E 7-12, 14-17 on pages 13-15)

# Course Evaluation Form - B.E.S.T.

**Date:**_____

**Company:**_____

**Course Title:**_____

**Check one:**

- ❒ Workshop
- ❒ Brush-up
- ❒ Communication and problem solving course

**Purpose:** The BEST program would like to know what you think about the quality of your learning experience. Your honest and objective responses will help us to improve our instruction. Thank you.

**Directions:** Participants: Please mark the box that best represents your thinking about each item. Use the following scale. (*Teachers: Please attach a cover page for each class, workshop, or individual set of Course Evaluation Forms indicating your estimate of the percentage of time spent on teaching, evaluation, and combined teaching-evaluation. Include this with the packet you submit to the business partner and the project director.)*

| | Low 1 | 2 | Moderate 3 | 4 | High 5 |
|---|---|---|---|---|---|
| **The Instructor** | | | | | |
| 1. Demonstrated knowledge of the subject. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 2. Presented the material clearly. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 3. Treated me with respect. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 4. Created a learning environment that was non-threatening. | ❒ | ❒ | ❒ | ❒ | ❒ |
| **Participants** | | | | | |
| 1. Were encouraged to ask questions and participate in discussions. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 2. Were encouraged to set goals for themselves. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 3. Were supportive of each other. | ❒ | ❒ | ❒ | ❒ | ❒ |
| **Myself** | | | | | |
| 1. I developed more confidence about my ability to learn. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 2. I increased my ability to learn by myself. | ❒ | ❒ | ❒ | ❒ | ❒ |
| 3. I would recommend this course to my co-workers. | ❒ | ❒ | ❒ | ❒ | ❒ |

**Other**

1. How have you used what you learned in this course on the job? at home? in the community?

_____

_____

_____

_____

2. How can we improve this course for the next group of participants? Please share your ideas.

_____

_____

# Reading Strategies Inventory - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This is a chance to find out what you do as you read. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Participants may choose to complete this in writing or orally. As you consider each part of the reading activity below, tell us all of the things you would do to help you complete the task successfully.

**Part 1: The Situation and Beginning Strategies**
You are beginning a new job at your company. Your supervisor just gave you a handbook describing all of your work responsibilities. She says to read this handbook and then she wants to talk to you about your job. What strategies would you use before reading the entire handbook carefully? Make a list and number each item.

**Part 2: In the Middle**
The handbook gets a little hard to read at some locations. While you are reading these parts, what strategies would you use to help you understand the information? Make a list and number each item.

**Part 3: At the End**
You have finished reading all of the manual. Before you talk to your supervisor, what strategies would you use to be certain you understand everything? Make a list and number each item.

# Writing Strategies Inventory - B.E.S.T.

**Name:** _____ **Date:**_____

**Company:** _____ **Course**_____

**Purpose:** This is a chance to find out what you do as you write. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Participants may choose to complete this in writing or orally. After completing the writing sample you should also complete this form. Tell us all of the things you did to help you successfully complete the writing task.

**Part 1: Beginning Strategies**
Before you began the writing task, what did you do? Write down all of the strategies you used before you began to write. Begin each item on a new line.

**Part 2: In the Middle**
When you were in the middle of writing the description of your job, what did you do? Write down all of the strategies you used as you wrote this piece. Begin each item on a new line.

**Part 3: At the End**
When you finished writing a description of your job, what did you do? Write down all of the strategies you used at the end of your writing. Begin each item on a new line.

# Math Strategies Inventory - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This is a chance to find out what you do as you solve math problems. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Participants may choose to complete this in writing or orally. As you consider each part of the math activity below, tell us all of the things you would do to help you successfully complete the math task.

**Part 1: The Situation and Beginning Strategies**
Identify a situation where you have to use math to solve a really difficult problem at work. Describe the situation below. Now, think about what you would do before beginning to solve this problem. Write down the strategies you would use before you actually started to solve this problem. Make a list and number each item.

**Part 2: In The Middle**
You have started to work on the problem you described above, but you find yourself stuck. What you are doing just doesn't seem right. What strategies would you use now? Write down everything you might do to solve the problem. Begin each item on a new line.

**Part 3: At the End**
You think you have come up with a solution to this challenging math problem. Before you use the answer in your work, is there anything else that you would do? Write down all of the strategies you would use after solving this problem but before using the answer in your work. Begin each item on a new line.

# Communication and Problem Solving Strategies Inventory
# B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This is a chance to find out what you do as you communicate and solve problems at work. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Participants may choose to complete this in writing or orally. As you consider each part of the activity below, tell us all of the things you would do to help you successfully complete the communication and problem solving task.

**Part 1: The Situation and Beginning Strategies**
You have a problem at work that involves several individuals with whom you work. Describe the situation below. Now, think about the strategies you would use at the beginning as you first start to think about this problem. Write down everything you would do as you first begin to think about solving the problem. Make a list and number each item.

**Part 2: In the Middle**
You are in the middle of working with your colleagues to solve this problem that involves all of you. As you work through the problem, what types of strategies would you use to be certain you are communicating effectively and solving the problem correctly? Write down everything you would do. Make a list and number each item.

**Part 3: At the End**
You have finished solving this problem. Before you leave your colleagues, are there any strategies you would use? Write down everything you would do. Make a list and number each item.

# Participant Self-evaluation Form - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This form will help us to determine if you see changes in your learning. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** The participant should complete the information below. Afterwards, the information should be shared in a conference with the teacher.

| **Changes since beginning participation in this program** | **Amount of Change** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | greatly decreased | decreased | no change | increased | greatly increased | don't know | continues to be excellent | does nc apply |
| **A. Reading** | | | | | | | | |
| 1. My ability to understand what I read. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which I take control of my own learning about reading. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. My confidence in my ability to become a better reader. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. My ability to use reading strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. My ability to figure out new reading strategies that work for me. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| **B. Writing** | | | | | | | | |
| 1. My ability to communicate in writing. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which I take control of my own learning about writing. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. My confidence in my ability to become a better writer. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. My ability to use writing strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. My ability to figure out new writing strategies that work for me. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| | greatly decreased | decreased | no change | increased | greatly increased | don't know | continues to be excellent | does nc apply |
|---|---|---|---|---|---|---|---|---|
| **C. Math** | | | | | | | | |
| 1. My ability to use math to solve problems. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which I take control of my own learning about math. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. My confidence in my ability to become better at math. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. My ability to use math and problem solving strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. My ability to figure out new math and problem solving strategies that work for me. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| **D. Communication and Problem Solving** | | | | | | | | |
| 1. My ability to communicate and solve problems effectively. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which I take control of my own learning about communication and problem solving. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. My confidence in my ability to communicate effectively. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. My ability to use communication and problem solving strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. My ability to figure out new communication and problem solving strategies that work for me. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| **E. Other** | | | | | | | | |
| 1. My overall self-confidence in myself as a learner. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The responsibility I take for my own learning. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. My ability to work effectively with a team. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Other (please describe) | | | | | | | | |
| 4. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| | greatly decreased | decreased | no change | increased | greatly increased | don't know | continues to be excellent | does not apply |
|---|---|---|---|---|---|---|---|---|
| **F. Workplace Changes:** | | | | | | | | |
| 1. My ability to read job-related material. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. My ability to write job-related material | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. My ability to use math to solve job-related problems. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. My ability to communicate effectively at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. My self-confidence. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 6. My ability to be responsible for my own learning at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 7. My ability to work effectively with a team. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 8. My initiative at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 9. My knowledge about the job I do. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 10. The quality of my work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 11. The quantity of my work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 12. The responsibility I assume in my work | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 13. My ability to solve problems at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 14. My interest in continuing my education. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 15. My willingness to accept changes at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 16. My being respectful of diversity and other points of view at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 17. Involvement in activities designed for continuous quality improvement. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Other (please describe) | | | | | | | | |
| 18. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 19. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

**Feel free to add comments below or on the back of this page, if necessary.**

# Teacher's Perception of Improvement Form - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This form will help us to determine if teachers see changes in participants' performance in their learning experiences. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** The teacher should complete the information below for each participant in the BEST program. Afterwards, the information should be shared in a conference with the participant.

| Changes since beginning participation in this program | Amount of Change | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | greatly decreased | decreased | no change | increased | greatly increased | don't know | continues to be excellent | does nc apply |
| **A. Reading** | | | | | | | | |
| 1. This person's ability to understand what they read. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which this person takes control of their own learning about reading. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. This person's confidence in their ability to become a better reader. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. This person's ability to use reading strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. This person's ability to figure out reading strategies that work for them. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| **B. Writing** | | | | | | | | |
| 1. This person's ability to communicate in writing. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which this person takes control of their own learning about writing. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. This person's confidence in their ability to become a better writer. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. This person's ability to use writing strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. This person's ability to figure out writing strategies that work for them. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

| | greatly decreased | decreased | no change | increased | greatly increased | don't know | continues to be excellent | does nc apply |
|---|---|---|---|---|---|---|---|---|
| **C. Math** | | | | | | | | |
| 1. This person's ability to use math to solve problems. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which this person takes control of their own learning about math. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. This person's confidence in their ability to become better at math. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. This person's ability to use math and problem solving strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. This person's ability to figure out math and problem solving strategies that work for them. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| **D. Communication and Problem Solving** | | | | | | | | |
| 1. This person's ability to communicate and solve problems effectively. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The extent to which this person takes control of their own learning about communication and problem solving. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. This person's confidence in their ability to communicate effectively. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. This person's ability to use communication and problem solving strategies. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. This person's ability to figure out communication and problem solving strategies that work for them. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| **E. Other** | | | | | | | | |
| 1. This person's overall self-confidence in themself as a learner. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. The responsibility this person takes for their own learning. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. This person's ability to work effectively with a team. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Other (please describe) | | | | | | | | |
| 4. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

# Reading Inventory - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** These activities will help us both to understand your strong areas in reading. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

## WORD RECOGNITION

**Purpose:** The purpose of this activity is to help you to find out which words you can already recognize by sight.

**Directions:** Read instructions below to participant. Record miscues. Mark each correct word response with C. Mark substitutions above the target word. Mark no responses by circling the target word. When the teacher needs to pronounce a word, indicate this with a T. Total correct **word** responses at the bottom. If participant recognizes all of the words correctly, this portion of the reading inventory need not be repeated.

I'd like you to try reading each of these words. Tell me when you would like to skip a word.

### I. Words in Isolation

| | | | | |
|---|---|---|---|---|
| above | against | below | bottom | collected |
| decide | during | factories | here | hospital |
| office | phone | plant | police | problem |
| were | when | where | worker | wrote |

### II. Words in Context

I do not think we should do it that way.

I want to apply for a new position at work.

Number correct (Please record the score) _____

## UNDERSTANDING WHAT YOU READ - I

**Note:** Use the performance on the word list to make a preliminary assessment of the appropriate level for reading comprehension. If the participant scores 8 or more (out of 10) on the comprehension questions for Level 1 or 2, have them attempt to complete the next highest level. Begin with level 1 if uncertain.

**Purpose:** The purpose of this activity is to help you to find out how well you understand what you read.

**Directions:** Please read the story "My First Deer with Bow and Arrow". Afterwards, I will ask you five questions. You will be able to look back if you wish.

- Have students read the selection orally or silently.
- Afterwards, ask the comprehension questions below.
- Score each answer as correct (2 points), partial (1 point), or incorrect (0 points).
- Score for gist, not word accuracy of response.
- Allow students to refer back to the passage to answer questions.
- Record total score (10 total points) and time.

### I. My First Deer with Bow and Arrow (0, 1, or 2 points for each item)

1. How can you tell that this hunter's brother is probably an older brother? _____
("My brother had been hunting for a few years." This hunter was 14 years old. "I hollered to my brother for help.")

2. Why did he get impatient and move around? _____
(He was a younger hunter.)

3. Why was it so hard for him to pull the bow back? _____
(He was shaking. or He was too young and not strong enough.)

4. How many arrows did he need to kill this deer? _____
(Two)

5. Did he kill an older or younger deer? How can you tell? _____
(Younger. It was a button horn buck.)

_____ **Total Score**

_____ **Time**

## UNDERSTANDING WHAT YOU READ - II

**Purpose:** The purpose of this activity is to help you to find out how well you understand what you read.

**Directions:** Please read the article "Women and Poverty". Afterwards, I will ask you five questions. You will be able to look back if you wish.

- Have students read the selection orally or silently.
- After reading, ask the comprehension questions below.
- Score each answer as correct (2 points), partial (1 point), or incorrect (0 points).
- Score for gist, not word accuracy of response.
- Allow students to refer back to the passage to answer questions.
- Record the time required for completing each passage.
- Record total score

### Women and Poverty

All over the United State, finding decent, affordable housing has become more and more difficult for women supporting families on low incomes.

- About 1/4 of all American families are single-parent families.
- In 1985, 87 our of every 100 single-parent households were headed by women.
- There are about 5 1/2 million single mothers.
- There are about 900,000 single fathers.

Generally, single mothers have a lot less money than single fathers. In 1985 the average income for single mothers was $11,644; average income for single fathers was $23,368. In 1986 there were 11,944,000 people living in female-headed families who were poor.

In fact, most women, even those who aren't single parents, don't earn as much as men. In 1988 women working full time earned 70% of what men earned. That means for every dollar a man earned, she earned 70 cents. The difference is even greater for workers with college degrees. Female college graduates earned 59% of what male college graduates earned.

In 1986, out of every 100 families headed by an employed woman, 22 were "poor", according to government definitions.

**I. Women and Poverty (0, 1, or 2 points for each item)**

1. Why is it so difficult for single women to find affordable housing? _____
(They make less money than men.)

2. What percentage of families in America have only one parent at home? _____
(25%)

3. On average, how much more did single fathers make compared to single mothers in 1985? _____
(about $12,000 or twice as much)

4. In 1988, how much did women working full time earn compared to men? _____
(About 70% of what men earned.)

5. In 1988, for every dollar a male college graduate earned how much did a female college graduate earn? _____
(Fifty-nine cents)

_____ **Total Score**

_____ **Time**

## UNDERSTANDING WHAT YOU READ III-A

**Purpose:** The purpose of this activity is to help you to find out how well you understand what you read.

**Directions:** Please read both articles. After each article, I will ask you five questions. You will be able to look back if you wish.

- Have students read the two selections orally or silently.
- After reading each selection, ask the comprehension questions below.
- Score each answer as correct (1 points), partial (1/2 points), or incorrect (0 points).
- Score for gist, not word accuracy of response.
- Allow students to refer back to the passage to answer questions.
- Record the time required for completing each passage.
- Record total score

### Beliefs, Principles, and Values

Tolerance

Tolerance is the practice of allowing or respecting the nature, beliefs or behaviors of others. Both inside *and* outside the company, tolerance can only enhance the achievement of our mission.

Personal Growth

This company is *about* personal growth. Whether it is growth in job responsibility, pay, education, or psychological and spiritual growth, we need to encourage it all! By the same token, there are a lot of people who are very content doing exactly what they have been doing and strictly working for their wages. This has to be OK, too. Along with growth within the company, we need to make every effort to promote personal growth when we bring new people into the organization. It would become a major part of our hiring policy, a kind of affirmative action program for anyone in need.

Individuality

Let me stress once again that the whole system being developed in this plan is based on improving the quality of life for the **individual**. Individuality is the strength of this organization and it is revered. The only time individuality takes second place is when the individual demand is counter to the need of the group; i.e. the common good.

Motivation

What makes me do something? People work for a variety of reasons, but motivators can essentially be labeled as *material* and *emotional*. Both are exceptionally powerful. As employee-owner-managers, it is our job to mix and match motivators to the best benefit of the organization; consequently, to the best benefit of the employees-owners-managers themselves.

Direct monetary reward motivators are great for altering direct kinds of behavior, such as output, safety awareness, sales, etc., but emotional or feeling motivators are equally important in an overall operation. They can be just as powerful for altering direct behavior; I eve they are better suited to the more complex and sophisticated side of behavior. Acknowledgment, appreciation and praise are all part of a person's feeling of ownership in an organization.

Caution must be exercised not to misuse or over-use motivators. They are powerful tools but can be dangerous. My worry is not in getting people to work hard, but that they will work too hard to the detriment of their health, welfare and safety. We as the owners, have a responsibility to ourselves and our respective families.

**III-A. Beliefs, Principles and Values (0 or 1 point for each item)**

1. What is the main idea of this passage? _____
(The beliefs, principles, and values that should guide this company.

2. What should be a major part of this company's hiring policy? _____
(To promote personal growth.)

3. Identify the principles that are important to this company? _____
(Tolerance, personal growth, individuality, and motivation.)

4. What would be an example of a personal motivator? _____
(Accept examples that reflect acknowledgment, appreciation, or praise)

5. How are material and emotional motivators the same? _____
(Both are powerful. They both change behavior. They both are powerful and can be dangerous.)

_____ **Total Score**

_____ **Time**

## UNDERSTANDING WHAT YOU READ III-B

**Purpose:** The purpose of this activity is to help you to find out how well you understand what you read.

**Directions:** Please read the article. Afterwards, I will ask you five questions. You will be able to look back if you wish.

- Have students read the selection orally or silently.
- After reading, ask the comprehension questions below.
- Score each answer as correct (1 points), partial (1/2 points), or incorrect (0 points).
- Score for gist, not word accuracy of response.
- Allow students to refer back to the passage to answer questions.
- Record the time required for completing the passage.
- Record total score

## COLOR PRINTERS FOR EVERY BUDGET

### The Macworld Lab tests 16 ink-jet and thermal-wax printers

Still procrastinating over making the leap to color printing? You may be running out of excuses: printer manufacturers keep discovering better, faster ways to apply pigments and render images, for less money.

The latest color machines still aren't about to replace monochrome printers -- regardless of how it works, a color printer is slower, more expensive, more complex, and more finicky about paper than its monochrome equivalent. But for business presentation materials, for page proofs, and for any application beyond gray-scale, this is a good time to follow the rainbow.

Or more accurately, *rainbows*: each of the several color-printing technologies offers its own strengths and financial requirements. Liquid ink-jet printers span the price spectrum, ranging from $379 to over $10,000 (see "Finding the Best Business Color"). Half the printers, however, are low-end machines priced at well under $1000. These are best for simple applications such as printing color presentations and jazzing up reports with colored graphs and spot color.

Solid ink-jet machines, priced between $5595 and $9995, are popular among publishers, thanks largely to an ability to print on any kind of paper. Thermal-wax printers have become the mainstays for business color printing, generally offering better output quality and faster performance than ink-jets can. Prices for thermal-wax machines have fallen into the monochrome laser territory, ranging from $995 to $8999.

Among the low-end ink-jets, the Apple Color StyleWriter Pro delivers superior image quality (though inferior text quality) and is more compact. The HP DeskWriter 560C's superior text quality and networking features give it an edge over the Apple unit but by a small margin. If you can live with the Color StyleWriter Pro's limited networking ability, and image quality is most important to you, pick the Apple unit.

In the solid-ink world, Tektronix's Phaser 300I wins hands down. The Data-products Jot PSe costs far less, but it can't print tabloid-size pages and its output is on the fragile side. If you need color business documents, consider a plain-paper capable thermal-wax machine instead.

Tektronix gets the gold in the thermal-wax category, too. Its Phaser 220I is fast, and its 600-by-300dpi resolution yields the best thermal-wax quality output I've seen. If your budget barks at the $5995 price, consider the 3995 Phaser 220e, which delivers similar quality.

**III-B. Color Printers for Every Budget (0 or 1 point for each item)**

1. Identify four problems you would face if you bought a color printer to replace your monochrome printer _____
(They are slower, more expensive, more complicated, and require special paper.)

2. Identify the three main types of color printers _____
(Liquid ink-jet printers, solid ink-jet printers, and thermal-wax printers)

3. Why are thermal-wax printers often used for business? _____
(They produce better quality and faster output.)

4. If you don't have a lot of money and are concerned about text quality and color printing, which machine should you buy? _____
(The HP DeskWriter 560C)

5. If you have need to print tabloid color pages, which machine would be a good choice? _____
(Tektronix's Phaser 300i)

_____ **Total Score**

_____ **Time**

**Total Score for Part III** _____

**Total Time for Part III** _____

## Changes in Job Performance: Supervisor's/Co-worker's Response Form
## B.E.S.T.

**Purpose:** This form will allow us to understand if the BEST program results in changes in the workplace. The information in this form will only be used to evaluate the BEST program. It will not be used by your company to evaluate employees.

**Directions:** The participant should complete the information in Part I below and return the form to the BEST instructor. The supervisor/co-worker who has been identified should then complete the rest of the information and return it to _____ _____

**Part I: Participant information**

Employee/participant: _____ Date_____

Company: _____

Plant: _____ Shift: _____

The name of the supervisor/co-worker who knows my work best is:

_____

---

**PLEASE CUT OFF THE BOTTOM HALF OF THIS PAGE**

## Part II: Employee Changes

Directions: This employee has participated in our program from _____ to ____ ___. Please check the box for each item that best describes the changes in this employee since he/she began participating in our program.

| Changes since beginning participation in this program | Amount of Change | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | greatly decreased | decreased | no change | increased | greatly increased | don't know | continues to be excellent | does nc apply |
| 1. This person's ability to read job-related material. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. This person's ability to write job-related material | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. This person's ability to use math to solve job-related problems. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 4. This person's ability to communicate effectively at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 5. This person's self-confidence. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 6. This person's ability to be responsible for their own learning at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 7. This person's ability to work effectively with a team. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 8. This person's initiative at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 9. This person's knowledge about the job he/she does. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 10. The quality of this person's work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 11. The quantity of this person's work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 12. The responsibility this person assumes in their work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 13. This person's ability to solve problems at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 14. This person's interest in continuing their education. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 15. This person's willingness to accept changes at work. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 16. This person's being respectful of diversity and other points of view in the workplace | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 17. Involvement in activities designed for continuous quality improvement. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Other (please describe) | | | | | | | | |
| 18. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 19. _____ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

**May we share this information with the participant? Yes _____ No _____**

**Feel free to add comments on the back of this page, if necessary.**

# Pre-Participation Writing Sample - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course** _____

**Purpose:** This is a chance to find out about your writing ability. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** You are moving up to a new position. To help the person who will take over your old position, you have decided to write a description of the responsibilities in your former job. Please write this description. You may use the back of these pages for notes, etc.

# Math Inventory - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course** _____

**Purpose:** This inventory will help us plan work for you. If you haven't had to use math over the years, you'll find that you have forgotten a lot. You're not expected to know how to do everything, so don't worry if you have trouble. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Do as many of these problems as you can. Skip everything you can't do. Please do your work on this paper.

1. 2001
   +1999

2. 8006
   -2868

3. 80.9 x .57 =

4. 32)19616

5. 8 1/8 + 2 1/2=

6a. $3^2$ =

6b. /49 =

7. one fourth = _____ (fraction) or _____ (decimal)

8. Robin is driving to Boston, a trip of 195 miles. She drives a steady 65 miles per hour. If she leaves at 1 PM and doesn't make any stops, what time would she arrive in Boston? _____

9. A cleanser is to be mixed with water in a ratio of 1 part cleanser to 4 parts water. If I am going to use a gallon of water, how much cleanser do I need? _____

10. 125 centimeters = _____meters.

11. Arrange the following numbers in order from smallest to largest.

.8 .04 4 0 1.3 1/3 1/4 .0015

## BONUS QUESTIONS

**12.** A certain part, to be acceptable must be within .78 millimeters of its target measurement which is 8.10 millimeters. Circle the measurements which are acceptable (i.e. within tolerance).

8.95 mm  7.63 mm  8 mm  7.10 mm  8.56 mm

**13.** The $450 you saved last year accumulated 7% straight interest. How much did the $450 earn?

_____

**14.** In the sketch what is the distance marked with a "?"? _____

**15.** If 3x - 2 = 10, what is x? _____

# Construction Math Inventory - B.E.S.T.

**Name:** _____ **Date:**_____

**Company:** _____ **Course**_____

**Purpose:** This inventory will help us plan work for you. If you haven't had to use math over the years, you'll find that you have forgotten a lot. You're not expected to know how to do everything, so don't worry if you have trouble. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Do as many of these problems as you can. Skip everything you can't do. Please do your work on this paper. YOU MAY USE A CALCULATOR

1. Write the following measurements as decimal fractions of a foot (to the nearest 100th).

3' 6" _____ 2' 3" _____ 5' 1" _____ 4' 4" _____

2. Write the following measurements in feet and inches.

2.5'_____ 4.125'_____ 20.2'_____ 6.33'_____

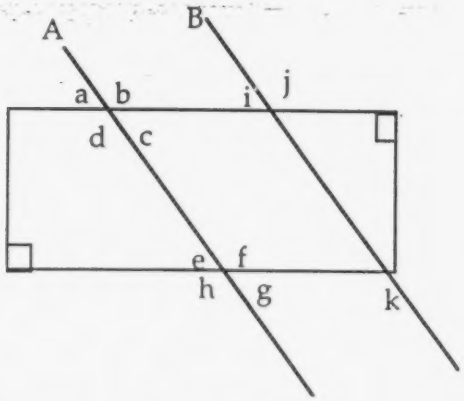
3. Give the measurement for the question mark in each right triangle.

4. What is the area of a triangle with a base of 5" and a height of 8"? _____

more -->

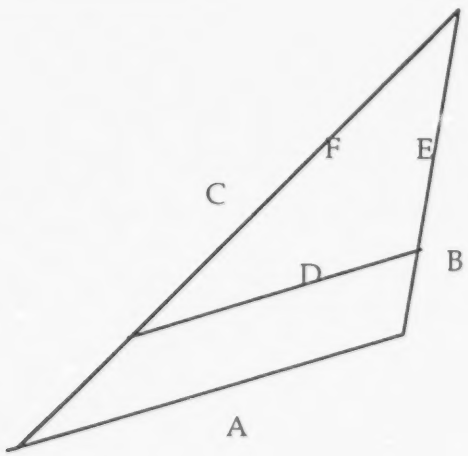
5. If angle b is 130 and lines A & B are parallel, give the measures of the following angles.

a=_____ e=_____ j=____ k=_____




6. The sides of the big triangle measure as follows: A = 8', B = 10', C = 14'. If you know that side D of the little triangle measures 6' and is parallel to side A, can you calculate the length of sides E? If yes, what is the length of E?

_____



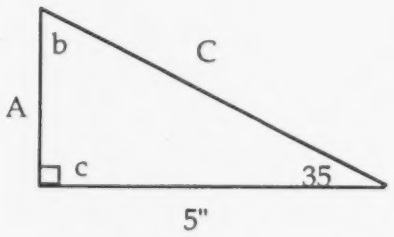

more -->

BONUS QUESTIONS

7 & 8. Give the measures of sides A and C of the triangle. Angle a is 35°. Round your answers to the nearest hundredth (i.e. 2 decimal places).

You must use the trigonometry functions on a calculator or table. If you don't know how to use trig, skip this question.

side A =_____ side C =_____




9. Figure the yardage of concrete needed to fill the form for the equipment pad shown below. It is rectangular and measures 18 feet by 6 feet by 9 inches.

10. How many degrees is the interior angle (angle a) of an octagonal (8 sided) gazebo?_____

See drawing below.

# Interpersonal Communications and Problem Solving
# B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This is a chance to find out how you communicate and solve problems. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Please answer the questions that follow.

**Part I. Please answer the following questions by circling the answer of your choice.**

1. In a meeting I should not let a speaker know that I don't understand because it would not be polite. Disagree Not Sure Agree

2. When a group is meeting to work on a task, it is important to not have disagreements because it just creates hard feelings. Disagree Not Sure Agree

3. When there is a problem to be solved in a group, it is important to find a solution as soon as possible. Disagree Not Sure Agree

4. When there are disagreements in a group, there will always be a winner and a loser in the end. Disagree Not Sure Agree

5. The best way for a group to make any decision is by a vote and the majority wins. Disagree Not Sure Agree

**Part II. Rate yourself on a scale of 0-10 with 0 being Never and 10 being Always on the following questions. Circle the appropriate number.**

6. A co-worker doesn't clean up the work station at the end of the shift as expected. When you see him, you say: "You are really a thoughtless slob. I would hate to live in your house. How could you leave such a mess for me?"

| Never | | | | | Sometimes | | | | | Always |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

7. Your friend is having trouble with another acquaintance. After listening to a brief complaint, you say, "I know exactly what to do. Just tell him to stay off your back. Let him know you are not an easy target for getting pushed around."

| Never | | | | | Sometimes | | | | | Always |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

8. A neighbor is playing very loud music and you are not able to concentrate on your work. You say, "When you play your music so loud, I feel frustrated because I am not able to concentrate on my work."

| Never | | | | | Sometimes | | | | | Always |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

9. You meet a group of three or four friends for dinner. You would like to go to a quiet place because you are very tired. One friend insists that the group go to a loud, busy restaurant. You say, "I guess it is okay with me."

| Never | | | | | Sometimes | | | | | Always |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

10. Your family is going on vacation. You want to save time, so you gather information and make decisions about where to go and what to do. When some family members object, you say, "I know what plans are best for us . All you have to do is just get in the car and come along."

| Never | | | | | Sometimes | | | | | Always |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

11. A friend calls you on the phone and wants to discuss his recent vacation. You have a lot of work you need to do. You say, "This is really not a good time for me to talk because I have a lot of things I need to get to. Could you call me tomorrow?"

| Never | | | | | Sometimes | | | | | Always |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

12. I am aware of the body language of the speaker when I am the listener in the communication process

Never Sometimes Always
0 1 2 3 4 5 6 7 8 9 10

13. I speak up for myself to get my needs met.

Never Sometimes Always
0 1 2 3 4 5 6 7 8 9 10

14. I maintain eye contact with the listener when I am speaking.

Never Sometimes Always
0 1 2 3 4 5 6 7 8 9 10

15. When I am listening to someone I let the speaker know how I think he/she is feeling.

Never Sometimes Always
0 1 2 3 4 5 6 7 8 9 10

16. When I attend meetings with a lot of people I don't know well I speak up and ask questions:

Never Sometimes Always
0 1 2 3 4 5 6 7 8 9 10

17. In situations where I am communicating with people whom I perceive as more powerful than I am, I am reluctant to express myself.

Never Sometimes Always
0 1 2 3 4 5 6 7 8 9 10

18. At lunch time you discover that one of your team members would like to ask you for help with a problem she is having on her machine but is very reluctant to do so. Is this an example of:

passive behavior assertiveness aggressiveness

19. Situation:
The person on the previous shift never cleans the work area. You arrange a time to meet the person off shift. How would you tell this person to clean up the work area?

20. You are in the middle of a meeting. The item on the floor has caused a lot of discussion and confusion with several people talking at the same time, and nobody seems to know what is going on. What can be done by the leader/chairperson to help the meeting run more smoothly? Check all the correct possibilities.

___ a. Adjourn the meeting

___ b. Call the meeting to order

___ c. Recess the meeting until everyone stops talking

___ d. Take a break

___ e. Review the agenda

___ f. Make committee assignments

21. Your daughter is assigned to do dishes on Tuesday and Thursday night. It is Thursday night, 8:00, dinner was at 6:00 PM, the dishes are still not done. You ask to talk to her.

Parent: When you don't do the dishes when you are suppose to I get annoyed because I can't finish cleaning the kitchen.

Daughter: Did you have to do dishes when you were growing up?

Pick the appropriate response.

____ Parent: Of course I did, and I had to empty the trash and do the laundry everyday before going to school.

____ Parent: That's not what I said.

____ Parent: That's not the point. I know you don't want to do the dishes, but when you don't do the dishes when you are suppose to I get annoyed because I can't finish cleaning the kitchen.

____ Parent: If you don't finish the dishes by 8:30 there will be no television for a month.

22. As a member of the employee recreation committee, you are helping to plan a company family night. You are head of the entertainment subcommittee. At the next meeting the committee is to decide on the entertainment. What would you do to prepare for the meeting? **Check as many possibilities as you need to.**

____ a. Bring cookies for everyone on the committee

____ b. Investigate local bands, and have a list of the three that you think offer the best deal
____ c. Survey employees to see what they want for entertainment

____ d. Advertise a talent show

____ e. Find out how much it would cost to have bingo for three hours

____ f. Hire a scary clown to entertain the kids.

# Learning Goals Inventory - B.E.S.T.

**Name:** _____ **Date:** _____

**Company:** _____ **Course:** _____

**Purpose:** This is a chance to find out the goals you have for this experience in the B.E.S.T. program. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Participants may choose to complete this in writing or orally. Please describe the goals you have for this experience with B.E.S.T. List them in order from most important to next important, and so on.

1. _____
2. _____
3. _____
4. _____
5. _____

## POST

**Purpose:** This is a chance to find out how you feel about your progress on the goals you identified earlier. The information in this form will only be used in the BEST program. It will not be used by your company to evaluate employees.

**Directions:** Participants may choose to complete this in writing or orally. Please describe your progress on each of the goals you identified earlier. Also, tell about any new goals you have now and the progress you are making on them. Check the appropriate box.

| | None | A Little | Some | Good | Great | No longer applies |
|---|---|---|---|---|---|---|
| Goal 1 above. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Goal 2 above. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Goal 3 above. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Goal 4 above. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |
| Goal 5 above. | ❑ | ❑ | ❑ | ❑ | ❑ | ❑ |

New Goals (list in order of importance to you)

| | None | A Little | Some | Good | Great |
|---|---|---|---|---|---|
| 1. _____ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 2. _____ | ❑ | ❑ | ❑ | ❑ | ❑ |
| 3. _____ | ❑ | ❑ | ❑ | ❑ | ❑ |

# Process Decisions Regarding the Use of Various Evaluation Instruments

## General Issues

1. We have two purposes in this project that sometimes conflict: gathering sufficient data to demonstrate the effects of participation in the B.E.S.T. program and making participants feel welcome as we attempt to meet their learning needs, especially at the beginning of their participation. We need to balance these purposes as best we can, always being sensitive to participants and their concerns.

2. Data on individuals gathered in this project will not be shared with business partners. They will only be used by teachers and participants to improve the learning experience. Data on individuals will also be sent to the outside evaluator in order to complete the required evaluation reports. He will guarantee its confidentiality.

3. Aggregate data and all evaluation reports based on these data will be provided to business partners and to the B.E.S.T. project director. These reports will never contain the names of any participants. Evaluation reports will also be available to participants.

4. Instruments developed for this project should be included in an individual portfolio for each participant along with other sources of information about the learning experience as determined by both participants and teachers. These should be kept confidential and reviewed together by participants and teachers on a periodic basis. This portfolio should be used as both a learning and an evaluation tool.

## Formative Data

Course Evaluation Form (page 8)

This will be completed by each participant at the last session of each workshop/discreet course and at the end of each 10-week brush-up cycle. Teachers will complete a summary sheet for the business partners, the employee council, and the project director. The summary sheet will also be sent to the external evaluator.

## Summative Data

Reading Strategies Inventory (page 9)

This will be completed by participants who work on reading. It will be completed during the second class session so as to not overwhelm participants who will complete the Reading Inventory during the first class session. The post-test will be completed at the final class session or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

Writing Strategies Inventory (page 10)

This will be completed by participants who work on writing. It will be completed during the second class session so as to not overwhelm participants who will complete the Writing Inventory during the first class session. The post-test will be completed at the final class session or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

Math Strategies Inventory (page 11)

This will be completed by participants who work on math. It will be completed during the second class session so as to not overwhelm participants who will complete the Math Inventory during the first class session. The post-test will be completed at the final class session or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

Communications and Problem Solving Strategies Inventory (page 12)

This will be completed by participants who work on communications and problem solving. It will be completed during the first and last class sessions.

Participant Self-evaluation Form (page 13)

This will be completed once a year by all participants or when the participant exits (without planning to return) after completing at least 10 hours of instruction.

Teacher's Perception of Improvement Form (page 16)

This will be completed once a year by teachers for all participants or when the participant exits (without planning to return) after completing at least 10 hours of instruction.

Reading Inventory

This will be completed by participants who work on reading. It will be completed during the first class session. The post-test will be completed at the final class session (after ten hours or more of instruction in reading) or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

Changes in Job Performance: Supervisor's/Co-worker's Response Form

This will be completed once a year by supervisors/co-workers for all participants or when the participant exits (without planning to return) after completing at least 10 hours of instruction.

Pre- and Post-Participation Writing Sample

This will be completed by participants who work on writing. It will be completed during the first class session. The post-test will be completed at the final class session (after ten hours or more of instruction in writing) or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

Math Inventory

This will be completed by participants who work on math. It will be completed during the first class session. The post-test will be completed at the final class session (after ten hours or more of instruction in math) or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

Interpersonal Communication and Problem Solving

This will be completed by participants who work on communications and problem solving. It will be completed during the first and last class sessions.

Learning Goals Inventory

This will be completed by all participants during the first and last class sessions. The post form will be completed at the final class session (after ten hours or more of instruction) or at the end of each six-month project reporting period (for participants continuing on into the next cycle.)

# BEST PROGRAM EVALUATION

**Interviews conducted with employees at**
**General Electric Corporation, John A. Russell Corporation,**
**and the Rutland Regional Medical Center**

**by**
**Robert T. McLaughlin, Ph.D.**
**Director**
**Vermont Workplace Education Program**

**May 1995**

## BEST Evaluation

*Goal* The aim of this evaluation effort was to ascertain the relative effectiveness of the BEST Program's services for General Electric, John A. Russell Corporation, and the Rutland Regional Medical Center.

*Methods* The assessment was performed by interviewing BEST instructors as well as individuals within these three firms to determine:

A. By what criteria do stakeholders with diverse perspectives assess whether a workplace education service is "effective"? That is, what is each stakeholder's operational definition of effectiveness?

B. Applying these criteria, to what extent do the stakeholders regard the BEST Program's services as having been effective?

Interviewees included program participants, supervisors, and other company officials with important perspectives on employee education and performance (e.g., education and human resource directors). The questions were posed open-endedly, using standard qualitative research methods. That is, questions were posed in a manner to ensure that respondents' own ways of thinking about the issue of "program effectiveness" were elicited rather than asking whether respondents agreed or disagreed with the validity of using effectiveness criteria posed by the interviewer. Two basic questions were posed in each interview (see below) -- one to elicit respondents' definitions of program effectiveness, the other to ask them to apply their definition to give an assessment of the extent to which they found the BEST Program to have been effective up to this point.

In each interview, once respondents had indicated they had exhausted their ideas, the interviewer summarized the points raised by the respondent, to be sure he had heard and understood the respondent correctly. The next step involved presenting the respondents with a draft of the evaluation report for their critique -- the qualitative research step known as a "member check" to ensure that the report provided an accurate representation of the respondents' insights and ideas. This review process only elicited comments from two stakeholders, both staffmembers of the BEST program, but their comments underscored critical issues not reflected by respondents initial statements as well as highlighted the limitations of relying solely on interviews to gauge program effectiveness. At the same time, an important goal of this evaluation was to identify criteria which diverse stakeholders regard as important criteria by which to assess workplace literacy/education program effectiveness. This knowledge can and should guide subsequent data collection using a mix of research methodologies (observation, student assessment results, etc.). The following presents a compilation of individual interview comments.

*Results*

*1. What are the criteria you use to determine whether a workplace education effort at (your institution) is effective?*

*General Electric*

A. Students/Employees *(seven interviewees)*

1. Become confident using computers.
2. Become confident helping others use computers.
3. Gain new knowledge.
4. Increase self-esteem.
5. Feel comfortable being in a classroom.
6. Feel comfortable admitting do not know something and asking for help.
7. Become confident when have to learn something new.
8. Program protects confidentiality of students.
9. Supervisors supportive of employee participation.
10. Manner in which teacher interacts with students -- respect, caring, patience.
11. More employee participation in group efforts (e.g., committees, team discussions, etc.) due to increased confidence and self-esteem.
12. Reduce absenteeism as employees feel more valued and morale increases.
13. Increase effectiveness of future training efforts as employees will be more confident about learning.

B. Human Resources Department Leader (one interviewee)

1. Reduce manufacturing losses and scrap.
2. Improve quality of output.
3. Strengthen employees' math and literacy skills.
4. Increase level of employee participation in education.
5. Increase employee self-esteem.
6. Reduce rate of loss of longer-term employees (e.g., those that have been with the company for 15 years or more) because they cannot cope with the rapid rate of change in this workplace.
7. Improve the atmosphere of the plant in terms of attitudes towards learning and education.
8. Increase the numbers of employees who bid on jobs -- an indicator of increased skills and/or confidence to handle new challenges.
9. Increase rate of promotion from within the company.
10. Increase employees' willingness to discuss any skill deficiencies they may have,

so that solutions can be sought openly.

C. Education Department Leader (one interviewee)

1. Increase employee self-confidence.
2. Increase employee bids for upgrade positions.
3. Increase number of employees taking courses elsewhere after getting GED or basic skills.
4. Exercise social/civic responsibility by investing in employees' education.
5. Help employees become more outgoing.
6. Increase number of employees volunteering to be on task forces, employee associations, focus groups, continuous review boards, etc.
7. Increase employees' literacy, numeracy and other essential skills.

### *John A. Russell Corporation*

A. Education Department Leader/Assistant Treasurer (one interviewee)

1. Provide better and more training for employees.
2. Help employees have more opportunities for promotion and advancement.

B. Personnel Department Leader (one interviewee)

1. Program to be non-threatening to employees -- a safe environment for learning.
2. Confidential, so that no one knows what skill level a person has attained.
3. Will help employees do their work more safely.
4. Will provide employees with skills in the workplace but also at home.
5. Offerings should be at hours convenient to employees.

C. Students/Employees (three interviewees)

1. Program to be non-threatening -- a safe environment for learning.
2. Provide learners with skills that can use on the job.
3. Help employees become more confident about being in a learning situation.
4. Encourage students to learn at their own rate, allowing them time to master the course content.
5.

### *Rutland Regional Medical Center*

A. Education Department Leader (one interviewee)

1. Positive feedback from managers.

2. Positive feedback from employees.
3. Participants being better equipped from promotion from within, laterally or vertically.
4. More self-confidence among participants -- attitude changes, perceptions by others of one's work.
5. Moving beyond basic courses to more advanced ones.

B. Personnel Department (one interviewee)

1. Attendance in courses
2. Written evaluation by course participants
3. How current and important the course topics are
4. Informal feedback by participants

C. Students/Employees (five interviewees)

1. The teacher's style and manner
2. The program's topics -- their relevance and usefulness.
3. Help with skills that are important.
4. Look for interesting topics, and topics that would help with work and employability and promotability.
5. Encourage participants to pursue further education.
6. Want a relaxed, safe atmosphere in which to learn.
7. Want to cover content in an efficient manner.

*BEST Program Instructors (four interviewees)*

1. Increase employee self-confidence.
2. Increase employee assertiveness.
3. Improve employees' handling of ridicule by others.
4. Improve employees' handling of own emotions
5. Increase employee skills in communicating about personal issues.
6. Increase employee proficiency in reading, speaking, math and other basic skills.
7. Expand the number and percentage of employees pursuing educational opportunities.
8. Increase employees' confidence in undertaking cross-training.
9. Increase employees' effectiveness in working as a team.
10. Engage supervisors and group leaders in consistently supporting subordinates' participation in education.

*II. Applying these criteria, to what extent has the BEST Program been effective? Please explain why.*

### *General Electric*

A. Students/employees

1. Have become confident using computers.
2. Have become confident helping others use computers.
3. Have gained new knowledge -- e.g., about basic math, reading, handling paperwork, knowing where to find information.
4. Have increased self-esteem significantly.
5. Have felt comfortable being in a classroom -- don't feel foolish asking questions, all employees are treated equally and with respect, can get one-to-one tutorial help, glad there are no tests.
6. Have felt comfortable admitting do not know something and asking for help.
7. Have become confident when have to learn something new.
8. Program has tried to protect confidentiality of students -- but this is still a problem. Until the company offers wider range of courses at different skill levels, co-workers will know that being a student means having low basic skills.
9. Only some supervisors have been supportive of employee participation -- this varies somewhat from one supervisor to the next and remains somewhat of a problem, though this is getting better as more supervisors seem to respect the value of the program.
10. Now are more confident even in non-work settings -- e.g., when having to keep a check book balance and filling out doctor's office forms.
11. Are experiencing less stress generally because understand more.

B. Human Resources Department Leader

1. Have heard some anecdotal indications of improved output from program participants.
2. Anecdotal data suggesting program has strengthened participants' math and literacy skills.
3. Some signs that BEST has improved the atmosphere of the plant in terms of attitudes towards learning and education.
4. Several supervisors have said they are noticing big improvements in participating employees' self-confidence, assertiveness, comfort in asking questions, and confidence in approaching new challenges.
5. Participants are referring others to the program, an excellent indication that these employees are feeling well served.

C. Education Department Leader

1. Anecdotal data suggesting increase self-confidence among participants.
2. Anecdotal data indicating participating employees have become more outgoing.
3. Students and instructors indicating that program has led to an increase employees' literacy, numeracy and other essential skills (though want firmer data on this important criterion of program effectiveness).

*Member Check Comments:* One stakeholder felt that the positive assessment by students/employees participating in the program at GE was an overly rosy assessment colored by respondents' desires to tell the evaluator "what he wanted to hear". The stakeholder said that this assessment did not reflect employee morale issues which, to this person, suggested that management probably did not support employee-investment strategies such as BEST as strongly as the interviews appeared to suggest. A second stakeholder felt, however, that the interviews of GE employees accurately reflected upper management's strong support for BEST while low employee morale was the result, instead, of front-line supervisors who "are responding to many stressful and conflicting pressures". Neither stakeholder's comments appear to invalidate the statements expressed by the initial interviewees who expressed (a) highly positive marks for BEST by program participants and (b) strong leadership support at the plant.

*John A. Russell Corporation*

A. Education Department Leader/Assistant Treasurer

1. Having a problem getting employees to commit to BEST offerings and would like assistance from BEST Program to come up with effective strategies to recruit employees into the program.
2. Aren't sure what else can do to encourage more employees to sign up -- job stress is a factor for some as they have little time or energy to do anything more in their lives.
3. The employees who have been faithfully involved see the program as very valuable -- providing a respectful, safe learning environment which helps them gain important skills.
4. Might want to survey employees about whether they would be interested in signing up for courses/workshops if they could be offered at different times.
5. Perhaps we (company) have not focussed as much as we should yet on addressing this problem of recruitment.

B. Personnel Department Leader

1. Not many have signed up because they are at a crucial point in one job site

where can't afford to take work time and because, more generally, the work force is stretched to the limit with the volume of work that must be done.
2. Employees who have signed up have said they don't feel threatened, embarrassed or stupid. They have indicated the courses are a very positive and useful experience.
3. Hadn't realized until this week that not many employees have participated so far in the BEST offerings. (The evaluation interview seemed to be a helpful catalyst to reflect on extent to which employees have used the program and found it useful.)

C. Students/Employees

1. Have found the courses to be very useful.
2. Have liked the way the courses were arranged, the personal help, the supportive manner of the program personnel, and the completely positive and non-threatening environment created by the instructors.
3. Have felt frustrated only because of the pressure of so much work making it impossible to attend classes sometimes.
4. Has helped employees with self-esteem.
5. Instructors have been very pleasant and encouraging.
6. The topics have been important for employees' future growth and careers. A wide variety of topics have been offered -- more than have time to take.
7. At start of the first course taken, was a surprise (one employee commented) when asked to articulate what one most wanted to learn (rather than be told by the teacher what would learn in the course). An orientation about this would be helpful at the very start of a course, for those not used to learning in this self-directed manner.
8. Like being able to learn at own pace, emphasizing mastery rather than "covering the material".
9. Wish more employees would be willing to sign up -- many are reluctant to admit they have trouble reading and in exercising other basic skills. So, would be good to offer private, confidential tutoring to increase recruitment. Another obstacle is offering the courses outside of company time. This is a problem because Russell employees already are working long hours and, often, in towns distant from Rutland on a job site. Therefore, employees are reluctant to stay after hours and to travel to a possibly distant classroom to pursue their studies.
10. (One student said) Wish class sessions would be longer -- seems like just when you get into a lesson and it's time to go, then have to pick up where you left off a week ago.
11. Also should have a video to show employees to encourage them to sign up for BEST courses.
12. One student said this was the most beneficial thing he's done in a long time.

*Member Check Comments:* One stakeholder commented, upon reviewing the initial summary of interview responses, that BEST program staff and company officials may need to "make B.E.S.T. a priority within Russell." A second stakeholder wondered whether respondents' suggestions to make classes easier to attend by making location and schedule adjustments would be sufficient to increase enrollment: "is management really committed?" this person asked.

### *Rutland Regional Medical Center*

A. Education Department Leader:

-Several participants feel renewer self-confidence.
-Several have gone on beyond BEST already -- this is an important measure.
- Have had promotions of BEST participants already.
- Have had some failures so far -- haven't identified well enough what BEST can offer and cannot, within the federal guidelines; and the Education Dept. Needs to follow-up on technical and more advanced topics desired by employees
- The assessment process has provided very useful data.

B. Personnel Department Leader:

- Courses and assessment process very relevant to organizational change process underway at RRMC.
- Many employees still in denial about their own skill deficits.
- Feedback in self-evaluation and evaluation by supervisors has emphasized need for training in time management, working with difficult people, study skills -- topics which BEST has tackled through workshops.
- When BEST came in, it wasn't marketed as a literacy program but somehow a stigma did become attached to the program. So, RRMC has worked hard to make BEST more than a program for very basic skills.
- Informally, the feedback has been very positive -- employees have felt it's been fortunate to have such a program offered to them.

C. Students/ Employees

1. The teacher's style and manner have been excellent.
2. The program's topics have been relevance and useful.
3. The program has helped with skills that are important -- e.g., writing.
4. Many people have taken advantage of many offerings.
5. Some have continued on to higher learning as a result.
6. Classes have maintained a safe, comfortable atmosphere.
7. Classes have covered a lot of content in a short time.
8. Some are looking for topics that BEST can't offer and the Education Department

is now working hard to collaborate with BEST personnel in designing these additional, highly desired topics.
9. BEST has helped spur a lot of people to consider education who may not have thought about it for years.

*Member Check Comments:* One stakeholder felt that the "cooperation...experienced between the education department, human resources and [the BEST program] is not reflected in the evaluation....There is a large amount of support at the hospital for BEST. But...finding the match between employee interest and scheduling classes at opportune times appears to be elusive." This individual recommended tracking attendance patterns over time in order to determine the best scheduling strategies to conform to fluctuating demands on employees. Another stakeholder commented that the efforts of BEST program staff to align the program with the organization's goals and education and training needs "has created an authentic and productive partnership" between the RRMC and BEST, "even if attendance is elusive".

### *BEST Instructors*

1. Have increased participants' self-confidence, assertiveness, handling of ridicule by others, handling of own emotions, and skills in communicating about personal issues.
2. Have increased participants' proficiency in reading, speaking, math and other basic skills.

## *Conclusions*

1. *Instructional Quality:* There was unanimous agreement among respondents that the quality of instruction delivered by BEST personnel has been high.

2. *Logistics:* Respondents at the John A. Russell Corporation indicated some logistical concerns and suggested improvements, while respondents at all three workplaces cited favorably the willingness of BEST personnel to adapt to each workplace's unique logistical constraints. At Rutland Regional Medical Center, respondents noted the willingness of students and instructors alike to deal with the necessary obstacle of erratic attendance due to the inherently unpredictable demands of work in a hospital. At General Electric, respondents acknowledged grateful the instructors' willingness to offer instruction at all hours of the day and night, to accommodate to a three-shift operation. At Russell, meanwhile, respondents suggested that the possibility of offering courses and workshops are hours better suited to employees' current work schedule should be explored.

3. *Employee recruitment:* At all three workplaces, respondents noted concerns about recruiting more students into the program. Because respondents unanimously regarded the program as "highly valuable", they said they wanted more employees to benefit from the program. Several respondents in the three workplaces said that some stigma is associated with participation in the program because it is seen as serving those with the weakest skills. At the hospital, several respondents said that some success has been achieved recently in counteracting the stigma; at General Electric and, especially, at Russell this remains a serious problem, according to respondents.

## *Recommendations*

1. Continue offering courses on company time, as this is valued and appreciated highly by employees.

2. Consider revising tuition reimbursement policy at General Electric so that company will still pay even if employee fails a course (so long as attendance record in course is perfect or near-perfect -- i.e., so long as employee attends and tries hard to succeed). I recommend strongly that this option be explored because several employees noted during separate interviews at General Electric that they and most co-worker are reluctant to take advantage of the company's tuition reimbursement benefit because they fear they might fail.

   Given the plant leadership's clear desire that more employees take advantage of this employee benefit, it would be very worthwhile to conduct an experiment of limited duration -- i.e., six to twelve months -- during which employees could receive full tuition reimbursement for courses even if they failed until they have failed a second or, perhaps, even a third course. The company's understandable concern that some might employees might abuse this benefit by enrolling for a course and not investing themselves in it sufficiently to pass it is, I believe, discouraging an undetermined number of employees from seeking employee-paid educational offerings because they lack confidence in themselves -- not because they would be likely to abuse the company's generosity.

   One useful step in researching this option would be to survey the work force and/or interview a random representative sample of employees to ask them whether they would be more likely to sign up for courses if they knew both that (a) the company would insist on a high rate of attendance (and/or other proxy indicators of student effort) yet (b) the company would still provide full

reimbursement were the employee to fail the course (up to a maximum number of failed courses to be specified by the company).

3. Develop a data gathering system to validate the extent to which employees are *demonstrating* skill gains in their courses and workshops. Utilize pre-tests and post-tests to measure gains for each participant, based on clear benchmarks/desired outcomes. Representatives from the three organizations should meet with BEST personnel to devise a common approach to tracking participating employees' learning gains. A student portfolio system could easily be used, whereby each employee maintains a portfolio of products demonstrating extent of mastery of key skills and knowledge over time, at intervals. Just such a meeting has been set for May 26th to determine how best to assess and report on student learning gains.

4. Encourage each company's employee education committee to ask participating employees to tell committee members of their assessment of courses and workshops. Participating students should be encouraged especially to notify committee members of any concern or problem they have with a course or workshop, so that the committee can discuss the issue and notify the BEST Program and appropriate company officials of a perceived concern.

5. In General Electric and RRMC, some employees noted a concern that the courses and workshops were not being clearly advertised as targeted to those needing to strengthen basic skills; this has resulted in some participants feeling that educational offerings were too basic for them. This concerns appears to apply more commonly to the workshops than to the courses.

6. On the other hand, interviewees noted in every setting that the relatively narrow range of offerings available through BEST (due to federal funding guidelines and company resource limitations) has led employees generally to regard BEST offerings as for the least educated -- resulting in some degree of stigma.

7. To reduce or eliminate the stigma associated with BEST offerings, it would, of course, be very helpful to be able to offer a wider range of courses and workshops of interest to employees at all skill levels. Given the impossibility of using federal funds for other than basic skill topics and the unavailability of corporate resources, it is strongly urged that the employee education committees work closely with their respective top managers to enlist employees knowledgeable in a wide range of desired topics (as highlighted in the assessment surveys) to volunteer to teach courses and workshops geared for a wide range of skill levels, related to the most popular topics. BEST

Program personnel and delegates from each employee committee could then meet together to explore whether and how to offer volunteer-taught offerings so that employees from *any* of the three organizations could attend. Thus, a first aid course taught by an RRMC employee, a hunter safety course by a GE employee, and a home renovation workshop facilitated by a Russell employee, could be offered to anyone interested from the three organizations. These offerings should be publicized as BEST Program services, along with the federally funded courses and workshops.

Such a joint employee education committee -- i.e., drawing representatives from the three employee committees -- also could explore valuably how to encourage course participants to donate time as child care providers on a rotating basis so that employees with young children could afford to participate in BEST offerings after their regular work hours.

8. BEST personnel should provide, as soon as possible, intensive support to Russell Corporation officials with regard to instituting effective methods for recruiting employees into the program.

9. Explore with company officials the value and feasibility of instituting simple processes by which supervisors of participating employees periodically assess the perceived impact of program participation in terms of outcomes for participants such as the following:

* increased effectiveness in handling paperwork, reading, performing arithmetic tasks, etc.
* increased morale, self-confidence, assertiveness, willingness to volunteer, comfort in participating actively in group activities, etc.
* increased willingness to ask for assistance
* increased output
* reduced rate of scrap/mistakes/errors
* increase in safe practices
* improved relations with supervisor, managers, etc.
* improved relations with peers
* increase in bidding for positions
* increase in confidence when faced with having to learn new skills
* increased effectiveness in handling stressful situations

One strategy that should be explored is to ask supervisors to complete a questionnaire rating their subordinate relative to the above dimensions when the employee first starts taking a BEST course, then during the course, and, finally, after completing the course. This data could be provided to the employee education committee, top management, and BEST Program

personnel on a regular basis. I would be pleased to draft a simple instrument for this purpose, should the companies and BEST personnel desire it.

10. Consider providing an orientation at the start of each BEST course, explaining to students that they may experience some confusion at first about the way in which learning will proceed in a self-paced, self-directed manner -- i.e., in a way very unfamiliar to most adult learners. While all interview respondents expressed a strongly favorable view of the manner in which BEST offers instruction, one employee suggested that this approach is initially disorienting and made him feel uncertain. It might be useful to ask students currently enrolled in BEST courses whether they shared that experience at the start of their enrollment.

11. Bring together company and program officials to explore possible strategies for increasing front-line supervisors understanding of and appreciation and support for their employees' involvement in the program.